City of Nashua, New Hampshire

WASTEWATER TREATMENT PLANT

Industrial Pretreatment Program Annual Report – 2021

NPDES Permit #NH0100170

Nashua Wastewater Treatment Plant
2 Sawmill Road
Nashua, NH 03060

THE CITY OF NASHUA
Division of Public Works
Wastewater Department

"The Gate City"

February 24, 2022

Mr. Alexis Rastourygoff, P.E.
Industrial Pretreatment Program
Wastewater Management Division
New Hampshire DES
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

Mr. Jay Pimpare
Pretreatment Coordinator
U.S. EPA - New England
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Subject: **City of Nashua, New Hampshire**
NPDES Permit No. NH0100170
Annual Pretreatment Report – 2021

Please find enclosed the City of Nashua, NH Annual Industrial Wastewater Pretreatment Report for calendar year 2021 as prepared by the City of Nashua Wastewater Treatment Plant staff. The report includes the following:

- EPA Summary
- Annual Report
- Tables
- Appendices

Also included in the package is the annual report from the Town of Hudson, NH as prepared by their pretreatment consultant Fuss & O'Neill. Both reports have also been sent electronically to EPA and NHDES. NHDES only receives an electronic copy at their request.

Sincerely,

Douglas H. Starr, P.E.
Environmental Permits and Program Coordinator

Attachments

City of Nashua Annual Pretreatment Report – 2021
Town of Hudson Annual Pretreatment Report - 2021

EPA Region 1 Annual Pretreatment Report Summary Sheet

POTW Name: **Nashua, New Hampshire**

NPDES Permit #: **NH 0100170**

Pretreatment Report Period Start Date: **January 1, 2021**

Pretreatment Report Period End Date: **December 31, 2021**

# of Significant Industrial Users (SIUs): **14**

# of SIUs Without Control Mechanisms: **0**

# of SIUs not Inspected: **0**

# of SIUs not Sampled*: **1**

# of SIUs in Significant Noncompliance (SNC) with Pretreatment Standards: **0**

# of SIUs in SNC with Reporting Requirements: **0**

# of SIUs in SNC with Pretreatment Compliance Schedule: **0**

# of SIUs in SNC Published in Newspaper: **0**

# of SIUs with Compliance Schedules: **0**

# of Violation Notices Issued to SIUs: **4**

# of Administrative Orders Issued to SIUs: **0**

# of Civil Suits Filed Against SIUs: **0**

# of Criminal Suits Filed Against SIUs: **0**

# of Categorical Industrial Users **9** (CIUs):

# of CIUs in SNC: **0**

- One (1) SIU not sampled due to zero discharge

Penalties

Total Dollar Amount of Penalties Collected: **$ 0**

# of IUs from which Penalties have been collected: **0**

Local Limits

Date of Most Recent Technical Evaluation of Local Limits: **December 30, 1999**

Date of Most Recent Adoption of Technically Based Local Limits: **December 30, 1999**

Pollutant	Limit (mg/l)	MAHL (lb/day)
Arsenic	0.16	11.46
Boron	17.48	169.
Cadmium	0.33	2.84
Carbon Disulfide	1.17	6.96
Chloroform	1.07	11.6
Chromium, hexavalent	1.85	64.1
Chromium, total	1.85	12.58
Copper	7.53	151
Cyanides, total	0.19	1.16
Hydrogen sulfide	0.550	3.25
Lead	1.20	0.39
Mercury	0.006	0.11
Nickel	25.57	155.
Phenols	0.83	4.41
Selenium	0.11	0.67
Silver:		0.49
Photoprocessors	1.89	
Nonphotoprocessors	0.05	
Sulfates	810	6,405.
Toxic Organics, total	5.0	n/a
pH	6.0-10.5	
BOD	250	n/a
Oil & Grease	100	n/a
TSS	300	n/a
Alkalinity	75	n/a
* see table 3-7		

*Table 3-7 is summarized on Table 5

NASHUA, NEW HAMPSHIRE

INDUSTRIAL PRETREATMENT PROGRAM ANNUAL REPORT - 2021

NPDES PERMIT NO. NH0100170

REPORTING PERIOD: JANUARY 1, 2021 to DECEMBER 31, 2021

The following sections correspond item by item to the requirements of the Nashua, New Hampshire National Pollutant Discharge Elimination System Permit No. NH0100170. Also attached is the Pretreatment Annual Report Summary.

SIGNIFICANT INDUSTRIAL USERS (*Group I*)

Amphenol TCS
91 Northeastern Blvd.
Nashua, NII 03062
Contact: Glen Charrette / Emile Laplante

Industrial Discharge Permit (IDP) No: I-101
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: YES [433]

BAE Systems - MEC
65 Spit Brook Road
Nashua, NH 03061
Contact: Norm Coutu / Ron Blanchette

Industrial Discharge Permit (IDP) No: I-102
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: YES [469]

Circuit Connect, Inc.
4 State Street
Nashua, NH 03063
Contact: Bob Lazzara / Joe Howard

Industrial Discharge Permit (IDP) No: I-103
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: YES [433]

Crane Security Technology Group
1 Cellu Drive
Nashua, NH 03063
Contact: Ryan Cameron

Industrial Discharge Permit (IDP) No: I-107
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: YES [433]

Mass Design
41 Simon Street
Nashua, NH 03063
Contact: Neil Chulada / Dave Justason

Industrial Discharge Permit (IDP) No: I-104
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: YES [433]

Pennichuck Water Works
200 Concord Street
Nashua, NH 03060
Contact: Chris Countie

Industrial Discharge Permit (IDP) No: I-105
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Prudential Overall Supply
45 Simon Street
Nashua, NH 03060
Contact: James McCool

Industrial Discharge Permit (IDP) No: I-109
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Rethz Light Metals
12 John Street
Nashua, NH 03060
Contact: Peter Retkevicz / Chad Retkevicx

Industrial Discharge Permit (IDP) No: I-106
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: YES [433]

The Bronzecraft Corporation
37 Will Street / 15 Simon Street
Nashua, NH 03061
Contact: Bryan Trombley

Industrial Discharge Permit (IDP) No: I-110
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: YES [433]

Unifirst Corporation
8 Industrial Park Drive
Nashua, NH 03062
Contact: David Rodier (resigned July, 2021) / Jason French / Sarah White (Corporate,MA)

Industrial Discharge Permit (IDP) No: I-108
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

SIGNIFICANT INDUSTRIAL USERS (*Group II*)

Four Hills Landfill
830 West Hollis Street
Nashua, NH 03060
Contact: Kerry Converse (retired) / (Darrin Santos)

Industrial Discharge Permit (IDP) No: I-201
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Harcros Chemical
8 Capital Street
Nashua, NH 03060
Contact:

Industrial Discharge Permit (IDP) No: I-202
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Protolabs
104 Perimeter Road
Nashua, NH 03060
Contact: Aric Tillberg (resigned September, 2021) / Barrett Stoks (Corporate, MN)

Industrial Discharge Permit (IDP) No: I-271
IDP Expiration Date: 8/31/2021
Subject to Categorical Pretreatment Standards: YES [433]

Rapid Finishing
43 Simon Street
Nashua, NH 03060
Contact: Keith O'Halloran

Industrial Discharge Permit (IDP) No: I-203
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: YES [433]

INDUSTRIAL USERS *(Group III)*

Autajon Packaging
100 Northwest Blvd.
Nashua, NH 03063
Contact: Mark Cobleigh

Industrial Discharge Permit (IDP) No: I-305
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Amphenol Printed Circuit
200 Innovation Way
Nashua, NH 03060
Contact: Dave Manning

Industrial Discharge Permit (IDP) No: I-304
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO
SIC CODE:

BAE Systems - NHQ
65 Spit Brook Road
Nashua, NH 03060
Contact: Norm Coutu

Industrial Discharge Permit (IDP) No: I-307
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO
SIC CODE:

BAE Systems
95 Canal Street
Nashua, NH 03061
Contact: Derek Gagnon / Robert Mitchell

Industrial Discharge Permit (IDP) No: I-306
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Benchmark Electronics
100 Innovative Way
Nashua, NH 03062
Contact: Art Ryan

Industrial Discharge Permit (IDP) No: I-308
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Clear Align (formerly General Dynamics)
24 Simon Street
Nashua, NH 03060
Contact: John Powers (retired in 2021) / Roger Paris

Industrial Discharge Permit (IDP) No: I-309
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Fab Braze
5 Progress Avenue
Nashua, NH 03062
Contact: Joe Lamy

Industrial Discharge Permit (IDP) No: I-310
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Geophysical (GSSI)
40 Simon Street
Nashua, NH 03060
Contact: Joe Wall (retired) / Marc Lussier

Industrial Discharge Permit (IDP) No: I-301
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Highland Tool Company
20 Simon Street
Nashua, NH 03060
Contact: Kevin Boulia

Industrial Discharge Permit (IDP) No: I-311
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Mark Lawrence Photographers
444 Amherst Street
Nashua, NH 03063
Contact: Larry McHugh, Jr.

Industrial Discharge Permit (IDP) No: I-312
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Protolabs
15 Charron Avenue
Nashua, NH 03063
Contact: Aric Tillberg (resigned September, 2021) / Barrett Stoks (Corporate)

Industrial Discharge Permit (IDP) No: I-313
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Protolabs
22 Charron Avenue
Nashua, NH 03063
Contact: Aric Tillberg (resigned September, 2021) / Barrett Stoks (Corporate)

Industrial Discharge Permit (IDP) No: I-314
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Resonetics, LLC
26 Whipple Street
Nashua, NH 03060
Contact: Vincent Archambault

Industrial Discharge Permit (IDP) No: I-315
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Saint Joseph's Hospital
172 Kinsley Street
Nashua, NH 03060
Contact: Mike Currier

Industrial Discharge Permit (IDP) No: I-317
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Southern NH Medical Center
8 Prospect Street
Nashua, NH 03061
Contact: Melissa Deering

Industrial Discharge Permit (IDP) No: I-316
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Valmet (G L & V Pulp Group)
1 Cellu Drive, Suite 200
Nashua, NH 03063
Contact: Michael Covey (assigned to different position) / Dan Sinicalski

Industrial Discharge Permit (IDP) No: I-318
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

W.H. Bagshaw, Inc.
Pine Street Extension
Nashua, NH 03060
Contact: Aaron Bagshaw / Jason LaFrance

Industrial Discharge Permit (IDP) No: I-319
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Wakefield Thermal
120 Northwest Blvd
Nashua, NH 03063
Contact: Rich Deshaies

Industrial Discharge Permit (IDP) No: I-303
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

INDUSTRIAL USERS (*Group IV*)

Anton's Cleaners
275 DW Highway South
Nashua, NH 03060
Contact: Charles A. Anton

Industrial Discharge Permit (IDP) No: I-401
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Anton's Dry Cleaning
379 Amherst Street
Nashua, NH 03060
Contact: Charles A. Anton

Industrial Discharge Permit (IDP) No: I-402
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Beazer East, Inc.
2 Hills Ferry Road
Nashua, NH 03060
Contact: Michael Slenska (Corporate) / Mike Conlin (Site Operator)

Industrial Discharge Permit (IDP) No: I-403
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Centorr Vacuum, Inc.
55 Northeastern Blvd.
Nashua, NH 03062
Contact: Mathew Paul

Industrial Discharge Permit (IDP) No: I-404
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Coating Systems, Inc. (Business closed in 2021)
55 Crown Street-
Nashua, NH 03060
Contact: Aram Jeknavarian (passed away February, 2021) / Emil Petrasek

Industrial Discharge Permit (IDP) No: I-405
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Custom Manufacturing
235 Main Dunstable Road
Nashua, NH 030602
Contact: Susan Beem

Industrial Discharge Permit (IDP) No: I-406
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Dispersion Services
25 Front Street
Nashua, NH 03060
Contact: Rick Kierstead

Industrial Discharge Permit (IDP) No: I-407
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

DOT/FAA Center
35 Northeastern Blvd.
Nashua, NH 03062
Contact: David Graveline

Industrial Discharge Permit (IDP) No: I-408
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Energy North (Liberty Utilities)
38 Bridge Street
Nashua, NH 03060
Contact: Mary Casey

Industrial Discharge Permit (IDP) No: I-409
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Microwave Techniques, LLC (formerly Ferrite)
165 Ledge Street
Nashua, NH 03060
Contact: Diana K. Wilson

Industrial Discharge Permit (IDP) No: I-413
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Grennerd Press and Machine
41 Crown Street
Nashua, NH 03060
Contact: Carl Jean

Industrial Discharge Permit (IDP) No: I-410
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

MACOM
486 Amherst Street
Nashua, NH 03063
Contact: Tim Blaser

Industrial Discharge Permit (IDP) No: I-412
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Kloeckner Metals
385 West Hollis Street
Nashua, NH 03060
Contact: Bill Loveland

Industrial Discharge Permit (IDP) No: I-411
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Nashua Foundries
5 Foundry Street
Nashua, NH 03061
Contact: Peter Lyons

Industrial Discharge Permit (IDP) No: I-414
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Pfeiffer Vacuum Technology
24 Trafalger Square
Nashua, NH 03063
Contact: Smith Gadd (assigned to different position) / Candace Carta

Industrial Discharge Permit (IDP) No: I-415
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Polymer Technologies
4 Bud Way, Unit 14
Nashua, NH 03063
Contact: Ronald Bogardus

Industrial Discharge Permit (IDP) No: I-416
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

RH Labs
1 Tanguay Avenue
Nashua, NH 03063
Contact: Steven Robinson

Industrial Discharge Permit (IDP) No: I-417
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Ripano Stoneworks
90 East Hollis Street
Nashua, NH 03060
Contact: Matthew Laliberte

Industrial Discharge Permit (IDP) No: I-418
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Stanley Iron Works
64 Taylor Street
Nashua, NH 03060
Contact: Preston Stanley

Industrial Discharge Permit (IDP) No: I-419
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Worthen Industries
3 East Spit Brook Road
Nashua, NH 03060
Contact: Pamela Doyon

Industrial Discharge Permit (IDP) No: I-420
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

Worthen Industries
34 Cellu Drive
Nashua, NH 03063
Contact: David Gill

Industrial Discharge Permit (IDP) No: I-421
IDP Expiration Date: 8/31/2026
Subject to Categorical Pretreatment Standards: NO

SUMMARY OF COMPLIANCE & ENFORCEMENT ACTIVITIES

REPORTING PERIOD:
JANUARY 1, 2021 to DECEMBER 31, 2021

INDUSTRY PERMITTING:

Renewed all industry permits in 2021 (5 year cycle)
New permits issued to Wakefield Thermal and three (3) Pennichuck Water Works off-site locations

INDUSTRY INSPECTIONS:

(See Table 1)

INDUSTRY SAMPLING:

(See Table 2)

COMPLIANCE SCHEDULES:

None

NOTICE OF VIOLATIONS:

- **Unifirst – I-108 SIU (Oil & Grease violation, returned to compliance)**
- **Prudential Overall Supply – I-109 SIU (Oil & Grease violation, returned to compliance)**
- **Bronzecraft - I-110 SIU (Late reports, returned to compliance))**
- **Harcros – I-202 SIU (Chromium violstion, returned to compliance)**
- **Clear Align- I-309 IU (pH violation, returned to compliance)**
- **W.H. Bagshaw – I-319 IU (Oil & Grease violation, returned to compliance)**

ADMINISTRATIVE ORDERS:

None

CRIMINAL OR CIVIL SUITS:

None

PENALTIES OBTAINED:

None

PUBLICATION OF IU'S IN SNC:

None published in 2021

PROGRAM OVERVIEW

During 2021 the Nashua wastewater treatment plant industrial pretreatment program (IPP) accomplished its goals to educate and assist industrial users to comply with the IPP and to protect the wastewater treatment facilities (plant, pump stations and collection sewers) and the environment through monitoring and inspections. During the year staff again continued to adhere to strict City policies concerning COVID-19. While following policies consistent with City requirements, staff was able to complete all inspections in-person adhering to not only City policy but those policies in place by the respective industries.

Nashua categorizes its industrial users as Group I, II, III and IV. The following explains how industries are grouped:

- Group I – Significant industries that are required to install and maintain industrial pretreatment systems. Typical systems include: pH neutralization, dissolved air floatation, metals precipitation, ultra-filtration, metals reduction, etc.

- Group II – Significant industries that are not required to install pretreatment systems, but in the opinion of the wastewater superintendent, may have a significant impact on the wastewater treatment plant.

- Group III – Non-significant industries that have low or non-toxic discharges such as hospitals, photo-processors, printers, small volume dischargers, etc.

- Group IV – Non-significant industries that have little or no impact on the wastewater treatment plant, but in most cases are involved in the manufacturing of a product and by the nature of their businesses create waste products. Industries that only discharge domestic wastewater may fall into this category.

Nashua has also recently established sub-categories for Dentists, Food Service Establishments and Microbreweries.

Nashua accepts wastewater (industrial and domestic) from the Town of Hudson, NH. Hudson's industrial pretreatment program is administered for Hudson by Fuss & O'Neill. Fuss & O'Neill inspects and samples 52 businesses annually and provides all reports to Nashua in addition to the annual pretreatment report which Nashua forwards to NHDES and EPA.

Residential septage is received at the Nashua plant from six (6) permitted septage haulers. In addition to their direct discharge to the Nashua plant, Pennichuck Water Works (public water supply) is also permitted to dispose of brine waste hauled from three (3) off-site water treatment plants.

All industries that are required to sample their wastewater are responsible all sampling and analytical charges whether performed by themselves and/or the City. All industries are billed an annual charge based on their permit groups (I through IV) and surcharges are assessed as needed. Chemserve is contracted by Nashua for sampling and analysis.

All of Nashua's industrial discharge permits (IDP's) are on five (5) year cycles and all were renewed in 2021. Any permit modifications are handled as needed on a case by case basis. During 2021 a new Industrial Discharge Permit was issued to Wakefield Thermal a new industry that expanded their manufacturing operations to Nashua.

During 2021, two (2) businesses closed operations. Those being Protolabs (104 Perimeter Road location), an SIU and Categorical industry and Coating Systems (55 Crown Street) a Group 4 industry. Several inspections were made during the year to review their status during closing and a final closeout inspection and sampling was also conducted at Protolabs. Protolabs plans are to move some of the manufacturing operations from the Perimeter Road location to their businesses on Charron Avenue.

In February, 2021, NHDES conducted a [virtual] IPP Compliance Inspection (PCI). The PCI findings indicated that the Nashua program was properly structured and implemented. There were recommendations to optimize the overall effectiveness of the program. These are listed below and the actions taken by staff:

- Local limits need to be reviewed and revised as applicable. The Nashua plant's NPDES permit expired two years ago. Staff will address local limits once the NPDES permit is reissued.

- Nashua's industrial discharge permits were updated for reporting requirements and potential for enforcement and penalties; prohibition of the discharge of hazardous waste; City contact information for regular and emergency reporting; and, permit renewal criteria.

- The inspection form was revised to include a review for the need for or modification to, a slug control program.

- Staff is now working with other City departments by participating in the site plan review process with the Planning and Engineering departments and receives periodic reports from the Building Department on Certificate of Occupancy permits.

During the year permit inquiries were received for various businesses considering locating to or expanding in Nashua. As mentioned above, staff now participates in the technical site plan review process with the City's Planning Department and also receives regular updates from the Building Department on Building Permits and Certificates of Occupancy.

By participation in the technical site plan review process, staff is allowed us to identify early on a commercial business or industry that may need an industrial discharge permit and/or other potential impacts on the system (i.e. oil & grease interceptor, amalgam separator, etc.).

The following initiatives were continued in 2021:

- Dental amalgam self-certification compliance:
  Continuing with efforts from 2020. As needed, new Nashua's dentist offices were identified and compliance packages sent. These included a cover letter, [Nashua] fact sheet and EPA self-certification form to be completed with instructions to send to the Nashua wastewater plant

- Fats, oil and grease (FOG) education:
  An earlier Nashua brochure was updated and sent to various departments and the school district as well all industries that were inspected in 2021. Plans to send to every food establishment in Nashua (over 400) put on hold due to the COVID-19 epidemic and city wide impacts on all food establishments.

- Microbreweries
  Work continues on a policy to address several microbreweries operating in Nashua. While new microbreweries since 2019 have been in the permitting program, any microbrewery in business before 2019 had not been permitted.

- Non-flushables education:
  With the onset of COVID-19 in 2020, it became readily apparent that the public was misinformed but well intentioned with disinfecting items at home. This resulted in flushing many products that were either "non-flushable" or advertised as "flushable" that were not flushable. This impacted several pump stations within the sewer collection system. A fact sheet was developed by Nashua in addition to materials made available by NHDES for public distribution and posting on the City website.

- Biosolids and PFAS
  In addition to the participation in the Northeast Biosolids workgroup which primarily focused on PFAS in biosolids and education of the public and septage haulers, we discussed and provided information to all of the industries inspected this past year. We told industries to expect more frequent monitoring of PFAS compounds in their respective discharges.

- Multi-Sector General Permit
  We filed the Notice-of-Intent (NOI) as part of the renewal of the wastewater plant's multi-sector general permit which covers stormwater discharges from the facility. Aside from routine site inspections and visual assessment of the three (3) stormwater outfalls, we now perform quarterly sampling of each of the outfalls for pH, TSS and COD in addition to annually for E coli. The facility's SWPPP was updated and annual training provided on the SWPPP and SPCC to all wastewater employees.

- Municipal Separate Storm Sewer System Permit (MS4)
  Working with the Engineering Department we completed several tasks including stormwater inspections and where applicable, development of stormwater pollution prevention plans (SWPPP) for all of the City's properties including schools, fire, police,

streets, parks, transit and parking garages. During industry IPP inspections, stormwater inspections and distribution of educational materials was included.

Pennichuck Water Works continues with a corrosion control program within the water distribution system and this program has been effective in reducing influent copper to the wastewater treatment plant. Effluent copper results are shown on Table 6.

In 2021, Nashua contracted with RMI to haul biosolids for land application. In compliance with 40 CFR Part 503 regulations for the use or disposal of sewage sludge, an annual report was submitted to EPA summarizing the activities of the biosolids program. A separate report(s) complying with the State of New Hampshire Env – Ws 800 sludge and septage regulations was prepared by RMI for Nashua and submitted to NHDES.

Other efforts undertaken by the City in 2021 included cleaning and CATV inspection of sanitary sewers (separate and combined), siphons and manholes. Where necessary, spot repairs, replacement and sewer rehabilitation (cure-in-place lining) undertaken. This work is consistent with CMOM requirements and will be ongoing for several years. In addition to wastewater staff, the City contracted with National Water Main, Ted Berry and Kenyon for this work.

WASTEWATER POLLUTANT SUMMARY

INFLUENT MONITORING DATA

(See Table 3)

EFFLUENT MONITORING DATA

(See Table 4)

EFFLUENT COPPER DATA

(See Table 6)

SEPTAGE RECEIVING DATA

(See Table 7)

BIOSOLIDS (SLUDGE) PRODUCTION DATA

(See Tables 8A, 8B)

SLUDGE QUALITY CERIFICATION

(See Appendices)

BIOTOXICITY SUMMARY

(See Appendices)

INTERFERENCE AND PASS THROUGH

(There were no interference pass-through events at the Nashua wastewater treatment plant during 2021)

INVESTIGATION AND PASS THROUGH

(No investigations of pass through were required in 2021)

MONITORING, INSPECTIONS AND EVALUATION

(Refer to Tables 1, 2, 3 and 4)

ACTIONS TO REDUCE SNC

(None in 2021)

LOCAL LIMIT ADOPTION *and* SEWER USE ORDINANCE

The current local limits were developed by Camp, Dresser and McKee in 1992 [Development of Local Limits for the City of Nashua Wastewater Treatment Plant Industrial Pretreatment Program].

The current City of Nashua Sewer Use Ordinance (SUO) became effective on December 30, 1999.

The wastewater treatment plant staff has drafted revisions to the existing sewer use ordinance as mandated by NHDES and EPA. The draft revisions have been approved by NHDES and EPA. The sewer use ordinance is under review with the Engineering Department and once finalized the City will move towards adopting the revised sewer use ordinance.

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Douglas H Starr — 2/24/2022

Authorized Signature — **Date**

Douglas H. Starr
Environmental Permits and Program Coordinator

David T Boucher — 2/24/2022

Authorized Signature — **Date**

David Boucher
Wastewater Superintendent

City of Nashua, New Hampshire

ANNUAL REPORT
INDUSTRIAL PRETREATMENT PROGRAM

2021

TABLES

Table 1 - 2021 Inspection Summary

Group I & II Significant Industrial Users (SIU) and Group III and Group IV Industrial Users (IU) Inspected in 2021

Group I & II SIU's Inspected

Industry	Address	City	IDP #	Group	Date of Inspection(s)		Comments
Amphenol TCS	91 Northeastern Blvd.	Nashua	I-101	I	10/6/2021		
BAE Systems - MEC	65 Spit Brook Road	Nashua	I-102	I	7/1/2021		
Circuit Connect	4 State Street	Nashua	I-103	I	9/30/2021		
Crane Security Tech. Group	1 Celiu Drive	Nashua	I-107	I	9/29/2021		
Four Hills Landfill	830 West Hollis Street	Nashua	I-291	II	11/9/2021		City owned landfill
Harcross Chemical	8 Capitol Street	Nashua	I-202	II	10/15/2021		
Mass Design	41 Simon Street	Nashua	I-104	I	10/14/2021		
Pennichuck Water Works	200 Concord Street	Nashua	I-105	I	7/28/2021		
Protolabs	104 Perimeter Road	Nashua	I-271	II	6/15/2021		Close-out inspection
Prudential Overall Supply	45 Simon Street	Nashua	I-109	I	9/22/2021		
Rapid Finishing	43 Simon Street	Nashua	I-203	II	10/13/2021		Zero discharge of categorical wastewater
Rethz Light Metals	12 John Street	Nashua	I-106	I	2/1/2021		Zero discharge of categorical wastewater
The Bronzecraft Corporation	15 Simon Street	Nashua	I-110	I	11/2/2021		
Unifirst	8 Industrial Park Drive	Nashua	I-108	I	4/20/2021	11/4/2021	

Group III IU's Inspected

Autajon Packaging	100 Northwest Blvd	Nashua	I-305	III	11/17/2021		
Amphenol Printed Circuit	200 Innovation Way	Nashua	I-304	III	11/3/2021		
BAE Systems	95 Canal Street	Nashua	I-306	III	7/2/2021		
BAE Systems - HQ	65 Spit Brook Road	Nashua	I-307	III	7/1/2021		
Benchmark Electronics	100 Innovation Way	Nashua	I-308	III	11/3/2021		
Clear Align (form General Dynamics)	24 Simon Street	Nashua	I-309	III	11/16/2021		
Fab Braze	5 Progress Avenue	Nashua	I-310	III	11/23/2021		
GSSI	40 Simon Street	Nashua	I-301	III	12/3/2021		New permittee 2019
Haywards Ice Cream Plant	Pine Street Ext.	Nashua	I-302	III	6/9/2021		
Highland Tool	20 Simon Street	Nashua	I-311	III	12/2/2020		
Mark Lawrence	444 Amherst Street	Nashua	I-312	III	11/17/2021		
Protolabs	15 Charron Avenue	Nashua	I-313	III	9/20/2021		
Protolabs	22 Charron Avenue	Nashua	I-314	III	9/20/2021		
Resonetics	26 Whipple Street	Nashua	I-315	III	12/2/2021		
St. Joseph Hospital	172 Kinsley Street	Nashua	I-317	III	11/17/2021		
SNH Medical Center	8 Prospect Street	Nashua	I-316	III	11/15/2021		
Valmet (form GL&V)	1 Celiu Drive, Suite 200	Nashua	I-318	III	12/9/2021		
W.H. Bagshaw	Pine Street Extension	Nashua	I-319	III	11/2/2021		
Wakefield Thermal	120 Northwest Boulevard	Nashua	I-303	III	2/23/2021		

Group IV IU's Inspected

Centorrr Vacuum	55 Northeastern Blvd	Nashua	I-404	IV	1/22/2021		
Coating Systems	55 Crown Street	Nashua	I-405	IV	1/20/2021		
Custom Manufacturing	235 Main Dunstable Road	Nashua	I-406	IV	1/27/2021		
Dispersion Services	25 Front Street	Nashua	I-407	IV	2/17/2021		
Microwave Techniques	165 Ledge Street	Nashua	I-413	IV	1/13/2021		Formerly Ferrite Microwave
Grennerd Press & Machine	41 Crown Street	Nashua	I-410	IV	1/15/2021		
Kloeckner Metals	385 West Hollis Street	Nashua	I-411	IV	2/10/2021		
MA-COM	486 Amherst Street	Nashua	I-412	IV	2/4/2021		
Nashua Foundries	5 Foundary Street	Nashua	I-414	IV	1/28/2021		
Pfeiffer Vacuum	24 Trafalgar Square	Nashua	I-415	IV	12/8/2021		
Polymer Technologies	4 Bud Way, Unit 4	Nashua	I-416	IV	2/9/2021		
RH Labs	1 Tanguay Street	Nashua	I-417	IV	2/24/2021		
Ripano Stoneworks	90 East Hollis Street	Nashua	I-418	IV	2/11/2021		
Worthen Industries	3 East Spit Brook Road	Nashua	I-420	IV	12/6/2021		
Worthen Industries	34 Celiu Drive	Nashua	I-421	IV	11/29/2021		

Table 2 - 2021 Sampling Summary - Compliance Sampling by City and by Industry

Group I & II Significant Industrial Users (SIU), Group III and Group IV Industrial Users (IU) Sampled in 2021

Industry	IDP #	Group	Sampled by City	Sampled by Industry	Violations	Comments
				Group I & II SIU's		
Amphenol TCS	I-101	I	YES	YES	NO	
BAE Systems - MEC	I-102	I	YES	YES	NO	
Circuit Connect	I-103	I	YES	YES	NO	
Crane Security Tech. Group	I-107	I	YES	YES	NO	
Four Hills Landfill	I-201	II	YES	YES	NO	Leachate from City owned landfill
Harcross Chemical	I-202	II	YES	YES	YES	Notice of Violation Issued
Mass Design	I-104	I	YES	YES	NO	
Pennichuck Water Works	I-105	I	YES	YES	NO	
Protolabs	I-271	II	NO	YES	NO	Business moved operations to Charron Avenue
Prudential Overall Supply	I-109	I	YES	YES	YES	Notice of Violation
Rapid Finishing	I-203	II	YES	YES	NO	Confirmed zero discharge
Rethz Light Metals	I-106	I	NO	NO	NO	Confirmed zero discharge
The Bronzecraft Corporation	I-110	I	YES	YES	YES	Letter of Deficiency - Late Report
Unifirst	I-108	I	YES	YES	YES	Notice of Violation
				Group III IU's		
BAE Systems - HQ	I-307	III	NO	YES	NO	
Clear Align	I-309	III	NO	YES	NO	Notice of Violation
Protolabs - 15 Charron Ave.	I-313	III	NO	YES	NO	
Protolabs - 22 Charron Ave.	I-314	III	NO	YES	NO	
Valmet	I-318	III	NO	YES	NO	
W.H. Bagshaw	I-319	III	YES	YES	YES	Notice of Violation
				Group IV IU's		

No Group IV IU's sampled in 2020

TABLE 3

NASHUA WASTEWATER INFLUENT COMPOSITE SAMPLING

Parameter		Date 2/2/2022 mg/l	HL 11.04 mgd lbs/day	RDL mg/l	Date 2/8/2021 mg/l	HL 9.71 mgd lbs/day	Date 10/23/2019 mg/l	HL 11.5 mgd lbs/day	Date 9/19/2019 mg/l	HL 8.91 mgd lbs/day	MAHL lbs/day	MAIL lbs/day
Arsenic	mg/l	<0.1	ND	0.1	<0.1	ND	<0.1	ND	<0.1	ND	10.63	9.45
Cadmium	mg/l	<0.01	ND	0.01	<0.01	ND	<0.01	ND	<0.01	ND	2.84	1.98
Chromium	mg/l	0.011	1.0128	0.01	0.01	0.8098	0.018	1.73	0.019	1.41	12.58	10.8
Copper	mg/l	0.068	6.261	0.01	0.058	4.6969	0.066	6.81	0.071	5.28	151	130.68
Cyanide	mg/l	<0.02	ND	0.02	<0.02	ND	<0.02	ND	<0.02	ND	1.16	1.03
Lead	mg/l	<0.01	ND	0.01	<0.01	ND	<0.01	ND	<0.01	ND	0.39	0.39
Mercury	mg/l	0.0001	0.0092	0.0001	0.0002	0.016	<0.0001	ND	<0.0002	ND	0.11	0.04
Nickel	mg/l	0.019	1.7494	0.01	0.017	1.3767	<0.01	ND	<0.01	ND	155	136.25
Silver	mg/l	<0.01	ND	0.01	<0.01	ND	<0.01	ND	<0.01	ND	0.49	0.49
Zinc	mg/l	0.274	25.2282	0.01	0.282	22.8368	0.23	22.06	0.276	20.5	55	35
Oil & Grease	mg/l	N/A	N/A	5	34.9	1,531	14.2	1,362	20.6	1,531	X	X

HL = Headworks Loading
RDL = Detection Limit
MAHL = Maximum Allowable Headworks Loading (CDM Local Limits Development - 1992 - Table 3-7, Page 3-17)
MAIL = Maximum Allowable Industrial Loading
X = No Water Quality, Process Inhibition or Sludge Based Limits

DHS February, 2022

TABLE 4

NASHUA WASTEWATER EFFLUENT COMPOSITE MONITORING

Parameter		Date 2/1/22 - 2/2/22 mg/l	Date 8/3/21 - 8/4/21	Date 6/7/21 - 6/8/21	Date 6/16/20 - 6/17/20 mg/l	Date 8/25/20 - 8/26/20 mg/l	RDL mg/l
Hardness	mg/l		69	57.4	60	63	0.5
TDS	mg/l		510	497	570	590	10
TSS	mg/l	11	3	4.7	3.1	9.4	4
Ammonia-N	mg/l	27.8	9.3	11.2	23.4	22.2	1
BOD	mg/l	11			6	18	
Fecal Coliform	MPN/100 ml	16.1			1	1	
Aluminum	mg/l		0.017	0.0229	<0.02	0.038	0.05
Arsenic	mg/l	<0.1			<0.1	<0.1	0.1
Cadmium	mg/l	<0.01	<0.0001	<0.0001	<0.0003	<0.0001	0.05
Chromium	mg/l	<0.01			<0.001	<0.001	0.01
Copper	mg/l	0.018	0.0092	0.0107	0.0083	0.015	0.01
Cyanide	mg/l	<0.02			<0.02	<0.02	0.02
Lead	mg/l	<0.01	0.00033	0.000306	<0.0003	0.0006	0.01
Magnesium			3.4	3.56	3.59	3.51	0.5
Mercury	mg/l	<0.0001			<0.0002	<0.0002	0.0002
Nickel	mg/l	<0.01	0.0051	0.00505	0.0052	0.0079	0.5
Silver	mg/l	<0.01			<0.01	<0.01	0.01
Zinc	mg/l	0.15	0.82	0.779	0.049	0.059	0.01
Oil & Grease	mg/l				20.6	14.2	5
pH	SU	7.29	6.88	7.07	7.5	7.61	
TRC	mg/l	0.022	<0.02	<0.02	<0.02	<0.02	

RDL = Detection Limit
TRC after dechlorination
DHS February, 2022

TABLE 5

Table 3-7
Allowable Headworks Loading Summary (lbs/day)
Nashua, New Hampshire

Pollutant	Water Quality Based Headworks Loading	Process Inhibition Based Headworks Loadings	Sludge Quality Based Headworks Loadings	Worker Safety Based Headworks Loadings	Maximum Allowable Headworks Loadings w/o S.F.	Average Domestic Wastewater Loadings*	Maximum Allowable Industrial Loadings
Aluminum	8,108	x	x	x	8,108	45.62	7,552
Antimony	5,957	x	x	x	5,957	0.06	5,361
Arsenic	x	x	11.46	x	10.63	0.12	9.45
Beryllium	19.8	x	x	x	19.8	0.29	17.56
Boron	x	x	x	x	x	58.97	x
Cadmium	2.84	157	11.46	x	2.84	0.58	1.98
Chromium, total	x	183	12.58	x	12.58	1.45	10.80
Chromium, (hex)	64.1	x	x	x	64.1	0.58	10.8***
Copper	151	171	x	x	151	5.22	130.68
Iron	33,889	x	x	x	33,889	--	30,500
Lead**	0.39	31	10.12	x	0.39	2.49	0.39****
Mercury	0.11	15	0.34	x	0.11	0.06	0.04
Molybdenum	x	x	x	x	x	x	x
Nickel	205	155	x	x	155	3.25	136.25
Potassium	x	x	x	x	x	--	
Selenium**	37.3	x	2.06	x	2.06	--	2.06
Silver**	0.49	42	57.22	x	0.49	0.29	0.49****
Thallium	142	x	x	x	142	0.06	127.74
Zinc	381	56	x	x	56	14.50	35.00
Chloride	x	x	x	x	x	4,494	x
Nitrate as N	x	x	x	x	x	--	x
Nitrite as N	x	x	x	x	x	--	x
Oil & Grease	x	x	x	x	x	790.38	x
Phenols	95,432	6,672	x	4.41	4.41	3.89	3.97****
Sulfate	x	x	x	x	x	1,450	
Hydrogen Sulfide	8.38	3,336	x	3.25	3.25	--	2.93
Sulfite	x	x	x	x	x	--	
Total Cyanide	63	13	x	1.16	1.16	0.01	1.03
Total Phosphorous	x	x	x	x	x	--	
Total Toxic Organics	x	x	x	x	29.7	--	26.70
Carbon Disulfide	x	x	x	6.96	6.96	--	6.26
Chloroform	4,622	x	--	11.60	11.60	--	10.44
Tetrachloroethene	8,029	x	x	77.69	29.70	--	26.7***
Toluene	x	26,688	x	86.97	29.70	--	26.7***
Trichloroethene	742,175	x	x	62.62	29.70	--	26.7***

Notes:
* Domestic loadings, were derived from Table 2-4.
** A safety factor (10% allotment for future growth) was not included.
*** Total chromium headworks cannot exceed 8.40 lbs/day; hexavalent chromium limit has therefore been reduced to 8.40 lbs/day. Similarly, individual constituents of total toxic organics cannot exceed allowable TTO load. Allowable organic concentrations have been reduced accordingly.
**** Domestic load not included in allotment of Maximum Allowable Headworks Loading.
***** Total Toxic Organic (TTO) allowable load based on industrial flow of 0.64 MGD, strength of 5 mg/L.
-- Data was not tested, reported or available at this time.
x No water quality, process inhibition or sludge based limits

TABLE 6

2021 - COPPER MONTHLY AVERAGE EFFLUENT MONITORING

MONTH	Cu (mg/l)
JANUARY	0.014
FEBRUARY	0.014
MARCH	0.012
APRIL	0.028
MAY	0.01
JUNE	0.012
JULY	0.01
AUGUST	0.011
SEPTEMBER	0.012
OCTOBER	0.013
NOVEMBER	0.019
DECEMBER	0.013

RDL = Detection Limit

DHS 1/28/2022

TABLE 7

Reporting Year 2021

Report Date: 1/11/2022
Facility Name: Nashua Wastewater Treatment Facility
Chief Operator: David L. Boucher
Mailing Address: 2 Sawmill Rd
Street Address: 2 Sawmill Rd
Municipality, State & Zip: Nashua, NH 03060
Telephone: 603-589-3560

Contact Person: David L. Boucher
Address: 2 Sawmill Rd
Municipality, State & Zip: Nashua, NH 03060
Telephone: 603-589-3560
Email Address: boucherd@nashuanh.gov

	Gallons
Quantitiy of septage received in reporting year	**874,500**

Deliveries from Septage Haulers Permitted Under Env Wq 1600

Permit #	Hauler Name	Hauler Municipality	Gallons
1	A-Bee Septic	Merrimack, NH	147,250
20	Felix Septic	Bow, NH	85,000
12	Kent Clean Septic	Auburn, NH	23,750
16	RM Ratta	Ayer, MA	52,000
13	Souhegan Septic Tank Svc	Amherst, NH	56,950
17	Windriver	Marlborough, MA	509,550
			874,500

Please e-mail this report to James.R.Talvy@des.nh.gov
If unable to report this form electronically, please prepare a written copy and return it to:
ATTN: Residuals Management Section
N.H. Department of Environmental Services - Water Division
PO Box 95 Concord NH 03302-0095

Env-Wq 1609.13 Record Keeping.
(b) Each facility permit holder shall submit an annual report to the department by the last business day of January for each previous calendar year in which the permit is valid, regardless of whether or not the facility received or processed septage during the previous calendar year.

TABLE 8A

Attachment A - 2021 EPA 503 Metric Tons
Class B
Nashua Wastewater Treatment Facility

Month	Wet Tons Biosolids	*Dry tons
January	554.22	156
February	516.19	144
March	573.06	163
April	612.00	160
May	652.81	159
June	743.97	196
July	719.83	208
August	745.12	215
September	713.51	207
October	636.26	180
November	704.86	190
December	657.07	170
Totals	***7,829***	***2,147***

**1 metric ton = 2204.6 lbs*

*Note: dry metric tons of solids reflect monthly average % solids results times wet tons biosolids as reported by RMI January-December.

TABLE 8B

Attachment B
Metals Analyses on Sludge
City of Nashua, NH
Nashua Wastewater Treatment Facility

2021 Calendar year Metals Analyses on NWTF Sludge									
Parameter	503.13 Table 3	01/07/21	02/26/21	04/22/21	06/14/21	08/03/21	09/23/21	11/15/21	Average
SQC Arsenic	41	14.0	12.0	2.0	12.0	21.0	25.0	17.0	15.0
SQC Cadmium	39	1.1	2.1	2.6	1.0	1.0	.9	.9	1.4
SQC Chromium	na	83.0	80.0	79.0	110.0	97.0	98.0	85.0	90.0
SQC Copper	1500	420.0	440.0	530.0	470.0	370.0	490.0	470.0	456.0
SQC Lead	300	37.0	26.0	30.0	39.0	48.0	40.0	37.0	37.0
SQC Mercury	17	.4	.4	.6	.5	.5	.5	.6	.5
SQC Molybdenum	na	13.0	11.0	9.0	17.0	16.0	18.0	13.0	14.0
SQC Nickel	420	22.0	27.0	20.0	28.0	25.0	21.0	25.0	24.0
SQC Selenium	100	4.3	3.8	6.6	3.2	3.2	2.3	3.0	3.8
SQC Zinc	2800	1300.0	1300.0	1470.0	1100.0	1100.0	1300.0	1200.0	1253.0

*Note: all results are in mg/kg, performed by EAI, with the exception of NHDES sampling using Absolute Resource Associates

Total Nitogen Report 2021			
	Sludge Quality Testing		
Month	SQC TKN	SQC	SQC Total N
Jan 2021	43000	63	43063
Feb 2021	53000	28	53028
Mar 2021			
Apr 2021	48000	72	48072
May 2021			
Jun 2021	47000	<20	47000
Jul 2021			
Aug 2021	39000	17	39017
Sep 2021	38000	52	38052
Oct 2021			
Nov 2021	48000	<30	48000
Dec 2021			
Minimum	38000.00	17.00	38052
Maximum	53000.00	72.00	53028
Total	316000.00	282.00	316232
Average	45143.00	40.00	45176

TABLE 9

Nashua Wastewater - Industrial Wastewater Pretreatment Program

Industries With Hazardous Waste Limited Permits

Industry	Address	Nashua IDP #	NHDES Hazardous Waste Limited Permit #	Type of System
Mass Design	41 Simon Street		DES-HW-LP-2021-03	WWTU
Benchmark Electronics	100 Innovative Way		DES-HW-LP-2016-09	ENU/WWTU
Crane Security technology	One Cellu Drive		DES-HW-LP-2016-10	ENU
Nashua Circuits	29 Crown Street		DES-HW-LP-2016-15	WWTU/ENU
BAE Systems - NHQ	65 Spit Brook Road		DES-HW-LP-2016-16	WWTU
BAE Systems	95 Canal Street		DES-HW-LP-2017-02	ENU/EVAP
Bronzecraft	37 Will Street		DES-HW-LP-2017-07	WWTU
Circuit Connect	4 State Street		DES-HW-LP-2018-01	WWTU
BAE Systems - MEC	65 Spit Brook Road		DES-HW-LP-2018-03	WWTU/ENU
Amphenol APC	91 Northeastern Blvd		DES-HW-LP-2020-02	WWTU/ENU
Pfeiffer Vacuum	24 Trafalger Square		DES-HW-LP-2020-03	EVAP

Note: BAE Systems - NHQ and Crane applications for renewal under review by NHDES

DHS February, 2022

City of Nashua, New Hampshire

ANNUAL REPORT
INDUSTRIAL PRETREATMENT PROGRAM

2021

APPENDICES

City of Nashua, New Hampshire

ANNUAL REPORT
INDUSTRIAL PRETREATMENT PROGRAM

2021

APPENDIX A

Dental Offices

Nashua Dentists - Amalgam Compliance Program - EPA Region 1 - NHDES - Nashua Wastewater IPP

				Certification Package Sent/Response			Amalgam Separator	
Nader Moavenian	DMD	33 Trafalgar Square Suite 201	03063	Yes	5/29/2020	Yes	9/9/2020	No
Bednar Dentistry		5 Main Street	03064	Yes	5/29/2020	Yes	6/9/2020	No
Advanced Family Denistry		613 Amherst Street	03063	Yes	5/29/2020	Yes	6/15/2020	Yes
Walter Buchan	DDS	331 Amherst Street	03063	Yes	5/29/2020	Yes	8/12/2020	Yes
John Machell	DMD	505 West Hollis Street	03062	Yes	5/29/2020	Yes	7/6/2020	Yes
Center for Dental Excellence		74 Northeastern Blvd Suite 19	03062	Yes	5/29/2020	Yes	9/8/2020	Yes
Laila Khalid	DMD	375 Amherst Street	03063	Yes	5/29/2020	Yes	9/11/2020	Yes
Hugh R. Phillips	DMD	505 West Hollis Street Suite 201	03062	Yes	5/29/2020	Yes	9/4/2020	No
William Bilodeau	DMD	76 Northeastern Blvd Suite 29-B	03062	Yes	5/29/2020	Yes	10/20/2020	Yes
Alpha Dental		39 Simon Street Unit 8	03060	Yes	5/29/2020	Yes	10/12/2020	Yes
Granite State Endodontics		505 West Hollis Street Suite 212	03062	Yes	5/29/2020	Yes	6/9/2020	Yes
Sterling Smiles		505 West Hollis Street Suite 113	03062	Yes	6/15/2020	Yes	6/24/2020	Yes
Green & Torio	OMFS LLP	39 Simon Street Unit 11	03064	Yes	5/29/2020	Yes	9/17/2020	No
Joseph Simonson	DMD	505 West Hollis Street Suite 212	03062	Yes	5/29/2020	Yes	6/1/2020	Yes
New England Periodontics		76 Northeastern Blvd Suite 34-A	03062	Yes	5/29/2020			
Timothy Carroll	DMD	3-H Taggart Drive	03060	Yes	5/29/2020	Yes	6/9/2020	Yes
Richard B. Hanson	DDS LLC	505 West Hollis Street Suite 211	03062	Yes	5/29/2020	Yes	7/16/2020	Yes
Pearl Dental (formRobert Larocque)	DDS	76 Northeastern Blvd Suite 35-A	03062	Yes	5/29/2020	Yes	6/5/2020	Yes
Harbor Homes	Health & Wellness Ctr 45 High Street		03060	Yes	5/29/2020	Yes	10/8/2020	No
Your Nashua Dental, PLLC		6 Concord Street	03064	Yes	5/29/2020	Yes	6/15/2020	Yes
Paisner Dental Associates		78 Northeastern Blvd Suite 5	03062	Yes	5/29/2020	Yes	9/3/2020	Yes
Harbor Homes (Mobile Dental Van)		45 High Street	03060	Yes	5/29/2020	Yes	N/A	N/A
Lang's Dental Center		60 Main Street Suite 110	03060	Yes	5/29/2020	Yes	6/15/2020	Yes
Northeastern Pediatric Dental		78 Northeastern Blvd Suite 6	03062	Yes	5/29/2020			

Simply Pediatric Denistry & Ortho		76 Allds Street #5	03060	Yes	5/29/2020	Yes	10/26/2020	Yes
John Diune	DDS	451 Amherst Street Suite 104	03063	Yes	5/29/2020	Yes	9/22/2020	Yes
Nashua Inplant Reconstructive Center		7-F Taggart Drive	03060	Yes	5/29/2020	Yes	10/7/2020	No
Krothapalli Family Dental		491 Amherst Street Unit 1	03063	Yes	5/29/2020	Yes	9/14/2020	Yes
Crown Dental		61 Amherst Street	03064	Yes	5/29/2020	Yes	6/9/2020	Yes
***Nashua Cosmetic & Restorative		1 Trafalgar Square Suite 103	03063	Yes	5/29/2020	Yes	10/12/2020	Yes
Dental Smiles of Nashua, PLLC		157 Main Dunstable Road Suite 201	03060	Yes	5/29/2020	Yes	9/15/2020	Yes
Charles Piplas	DDS	280 Main Street Suite 311	03060	Yes	5/29/2020	Yes	6/9/2020	Yes
Orthodontic Associates of NE		1 Trafalgar Square Suite 201	03063	Yes	5/29/2020	Yes	6/9/2020	No
Rose L. Wang, DMD & Associates		159 Main Dunstable Road Suite 103	03060	Yes	5/29/2020	Yes	8/11/2020	Yes
Craig McLaughlin	DDS	280 Main Street Suite 411	03060	Yes	5/29/2020	Yes	6/9/2020	No
Patricia M. Hamdan	DMD	280 Main Street Suite 341	03060	Yes	5/29/2020	Yes	6/9/2020	Yes
Greenwood Dental		112 Spit Brook Road Suite C	03062	Yes	5/29/2020	Yes	9/17/2020	Yes
Landmark Dental		283 Broad Street	03063	Yes	5/29/2020	Yes	7/1/2020	Yes
Kerry Wu	DMD	127 Amherst Street	03064	Yes	5/29/2020	Yes	6/24/2020	No
Levesque Family Dentistry		193 Kinsley Street Suite 105	03060	Yes	5/29/2020	Yes	9/15/2020	Yes
Suren Chelian	DMD	29 Riverside Street Unit D	03062	Yes	5/29/2020	Yes	9/8/2020	No
Minasian Family Dentistry		15 Broad Street	03064	Yes	5/29/2020	Yes	7/13/2020	No
Nashua Oral Surgery		20 Cotton Road Suite 202	03063	Yes	5/29/2020	Yes	6/2/2020	No
Kalil & Kress, PA Family Dentistry		303 Amherst Street	03060	Yes	5/29/2020	Yes	6/9/2020	Yes
Gentla Dental of Nashua		151 Main Street	03060	Yes	5/29/2020			
Maplewood Dental Group		20 Merrit Parkway	03062	Yes	5/29/2020			
Southern NH Orthodontics (Michael Chow, DDS)		305 Main Street	03060	Yes	5/29/2020	Yes	9/15/2020	Yes
Nashua Dentistry & Orthodontics		155 Kinsley Street	03060	Yes	5/29/2020	Yes	7/1/2020	Yes
Modern Dental/Perfect Smiles		226 Broad Street	03063	Yes	5/29/2020	Yes	6/30/2020	Yes

Greater Nashua Dental		31 Cross Street	03064	Yes	5/29/2020	Yes	6/9/2020	No
Merrimack Valley Dental		155 Main Dunstable Road Suite 220	03060	Yes	5/29/2020			
Nashua Family Dentistry		25 Riverside Street Suite 201	03062	Yes	5/29/2020			
Rochelle Horsley	DMD	322 Amherst Street	03063	Yes	5/29/2020	Yes	10/5/2020	Yes
Wellspring Dental Group		155 Main Dunstable Road Suite 140	03060	Yes	5/29/2020	Yes	6/9/2020	Yes
Aspen Dental		274 DW Highway Unit 6	03060	Yes	5/29/2020			
Fisichelli, Beach & Brar Family Dentistry		33 Broad Street	03064	Yes	5/29/2020	Yes	7/13/2020	Yes
Salvatore Colletta	DMD	76 Allds Street	03060	Yes	5/29/2020	Yes	6/9/2020	Yes
Salvatore Guerriero	DMD	76 Allds Street	03060	Yes	5/29/2020	Yes	6/9/2020	Yes
Scott Bobbitt	DMD	76 Allds Street	03060	Yes	5/29/2020	Yes	6/9/2020	Yes
Scott Robitaille	DMD	76 Allds Street	03060	Yes	5/29/2020	Yes	6/15/2020	Yes

City of Nashua, New Hampshire

ANNUAL REPORT
INDUSTRIAL PRETREATMENT PROGRAM

2021

APPENDIX B

Fats, Oil & Grease
(Food Service Establishments)

NASHUA FOOD SERVICE ESTABLISHMENTS - FOG COMPLIANCE PROGRAM

RESTAURANTS

Food Service Establishment	Address	Zip Code
110 Grill	27 Trafalgar Square	03063
17 Prospect Café	17 Prospect Street	03060
217 Nashua Innkeepers, LLC	15 Tara Blvd.	03063
7-Star Pizza Restaurant, LLC	235 Main Street	03063
809 Grill & Lounge	43 West Hollis Street	03060
99 Restaurants, LLC	10 St. Laurent Street	03064
Aegean Pizza & Seafood	150 Broad Street	03063
AFP 105 Corp.	11 Tara Blvd.	03062
Alltown Market Pizza	242 Amherst Street	03060
Antojitos Mexicano Lounge	60 West Hollis Street	03060
Applebee's	379 Amherst Street	03063
Arby's	621A Amherst Street	03060
Auntie Anne's	310 Daniel Webster Highway	03060
B. Good	219 Daniel Webster Highway	03060
Bani Mini Market	52 Walnut Street	03061
Bagel Alley	1 Eldridge Street	03060
Barnes & Noble	235 DW Highway	03060
Bertucci's	406 Amherst Street	03060
BJ's Wholesale Club	8 Sexton Avenue	03060
Blake Pizza	310 DW Highway	03060
Bob's Discount Furniture	283 DW Highway	03060
Bob's Pizza	115 East Hollis Street	03060
Bobola's Restaurant	9 Simon Street	03060
Bonhoeffer's Café	8 Franklin Street	03064
Boys & Girls Club	One Positive Place	03060
Bravo Catering, LLC	291 Main Street	03060
Bruster's Ice Cream	621B Amherst Street	03060
Bud's Restaurant	295 Lake Street	03060
Buffalo Wild Wings	310 DW Highway	03060
Burger King #1261	283 Amherst Street	03060
Burger King #14809	300 Main Street	03060
Burton's Grill	310 DW Highway	03060
Butter N Jam	449 Amherst Street Unit E	03060
C.I. Catering	35 Northeastern Blvd	03062
Café 505 Celebrations	505 Amherst Street	03063
Café Services	110 Spitbrook Road	03062

California Burrito's	2 Cellu Drive	03063
California Burrito's	101 Factory Street	03060
Casa Blanca	34 1/2 Canal Street	03060
Casa Vieja Mexican Grill	96 Main Street	03060
Cedars Café	379 Amherst Street	03063
Chen Yang Li	379 Amherst Street	03063
Chick-Fil-A	377 Amherst Street	03063
Chicken N' Chips	12 West Hollis Street	03063
Chili's	285 DW Highway	03060
Chipotle Mexican Grill	225 DW Highway	03060
Chipotle Mexican Grill	356 Amherst Street	03063
Chrislou, LLC d/b/a Nashua House	40 East Hollis Street	03060
Christopher's Subs & Pizza	264 Main Dunstable Road	03062
Chunky's Cinema Pub	150 Coliseum Avenue	03062
Ciao's Café	20 Trafalgar Square	03063
Ciao's Pizza & Subs	495 Amherst Street	03063
Cibao Kitchen	130 Ash Street	03060
City Moose Café	30 Temple Street Suite 205	03060
City Room Café	105 West Pearl Street	03060
Codex B.A.R.	112 West Pearl Street	03060
Coldstone Creamery	2 Cellu Drive Suite 111	03063
Court House Pizza	147 West Pearl Street	03060
Courtyard by Marriott	2200 Southwood Drive	03063
Crane Restaurant	113 West Pearl Street	03060
Cravings Café	64 East Pearl Street	03060
Cucina Toscana	427 Amherst Street	03060
Danelly's Subs & Pizza	87 Allds Street	03060
Dartmouth Hitchcock	2300 Southwood Drive	03060
Denny's	34 Gusabel Avenue	03063
Dolly Shakers	38 East Hollis Street	03060
Domino's Pizza	270 Amherst Street	03060
Domino's Pizza	99 Northeastern Blvd	03060
Doubletree by Hilton	2 Somerset Parkway	03063
Dough Life	310 DW Highway	03060
Dudley's Concessions	300 West Hollis Street	03060
Dunkin Donuts	119 East Hollis Street	03060
Dunkin Donuts	300 Main Street	03062
Dunkin Donuts	38 Broad Street	03060

Dunkin Donuts	190 Amherst Street	03064
Dunkin Donuts	260 Amherst Street	03063
Dunkin Donuts	239 Main Dunstable Road	03062
Dunkin Donuts	109 DW Highway	03060
Dunkin Donuts		
Dunnas, LLC d/b/a Dunkin Donuts	310 DW Highway	03060
Eeskay NH/Boston Billiards	55 Northeastern Blvd	03062
El Paisano Mexican Restaurant	64 Palm Street	03060
El Ranchito Bar & Grill	44 West Hollis Street	03060
Enrico & Marco d/b/a Lui-Lui	259 DW Highway	03060
Espresso Pizza	85 Main Street	03060
Family Pizza & Roast Beef	9 Merrit Parkway	03060
Firehouse Subs	341 Amherst Street Unit 6	03063
Fireside Inn	10 St. Laurent Street	03060
Five Guys Burgers & Fries	341 Amherst Street	03063
Five Guys Burgers & Fries	259 DW Highway	03060
Flir Café	9 Townsend West	03063
Fody's	9 Clinton Street	03060
Fratello's	194 Main Street	03060
Fight Kingdom	12 Simon Street	03060
Funworld	200 DW Highway	03060
Giant of Siam	90 Main Street	03061
Giovanni's	14-A Broad Street	03063
Global Flavors, Inc.	112 DW Highway	03060
Golden Dragon	300 Main Street	03060
Grainery Restaurant	36 Otterson Street	03060
Grand Buffet	350 Amherst Street	03063
Great Harvest Bread Co.	4 Sunapee Street	03063
Gula Haven	40 Canal Street	03060
Haluwa Restaurant	44 Gusabel Avenue	03062
Hampton Inn	407 Amherst Street	03062
Hayward's Ice Cream	7 DW Highway	03060
Holiday Inn	9 Northeastern Blvd	03062
Holman Stadium Food Services	67 Amherst Street	03060
Honey Baked Ham Co.	257 DW Highway	03060
Honey Dew Donuts	104 Canal Street	03060
IHOP	230 DW Highway	03060
India Palace	493 Amherst Street	03063

Jajabelle's	182 Main Street	03060
Joanne's Kitchen	219 Main Street	03060
Jordan's Furniture	327 DW Highway	03060
K'Done's Thai Dining	493 Amherst Street	03060
Karas, Inc. d/b/a Giannis Pizza	19 Charron Avenue	03063
Kentucky Fried Chicken	300 Main Street	03063
Kinsley House of Pizza	118 Kinsley Street	03060
La Carreta Tapatia	139 DW Highway	03060
La Hacienda Del Rio	4 Taggart Drive	03060
Las Dos A-A	9 Canal Street	03060
Latin Bakery	33 Lowell Street	03060
Launch Café	17 Tanguay Avenue	03063
Lilac Blosssom	650 Amherst Street	03063
Lilac Blosssom	385 East Dunstable Road	03060
Liquid Therapy	14 Court Street Unit B	03060
Little Caesar's	650 Amherst Street	03063
Longfellow Swim & Tennis	140 Lock Street	03064
Longhorn Steakhouse	5 Harold Drive	03060
Main Street Gyro	215 Main Street	03060
Maplewood Pizza	25 Merrit Parkway	03060
Market Basket	375 Amherst Street	03063
Martha's Exchange	185 Main Street	03060
Maza Mediterranean Grill	274 DW Highway	03060
McDonalds	3 Northeastern Blvd	03062
McDonalds	45 East Hollis Street	03060
McDonalds	255 DW Highway	03060
McNulty & Foley Catering	124 East Hollis Street	03060
Michael Timothy's	212 Main Street	03060
Midfield Café	83 Perimeter Road	03063
Milano's Pizza	1 Broad Street	03064
Millyard Brewery	25 E. Otterson Street	03060
Mint Café	13 Canal Street	03060
Moe's Southwest Grill	256 DW Highway	03060
MRM Restaurant d/b/a Takumi	197 DW Highway	03060
Nancy's Diner	25 Canal Street	03063
Nashua Cal Ripken (Murray Field)	67 Amherst Street	03060
Nashua Country Club	25 Fairway Street	03060
Nashua Garden	121 Main Street	03060
Nashua Little League (Concessions)	15 Osgood Road	03060

Nashua Little League (Lajoie Field)	North 7th Street	03060
Tio Juan's Margaritas	Canal Street	03060
Nashway/Dunkin Donuts	242 DW Highway	03060
Nature's Nectar	310 DW Highway	03060
New Leda Lanes, Inc	338 Amherst Street	03063
New Leda Lanes, Inc	340 Amherst Street	03060
New Taj India	47 East Pearl Street	03060
NH State Liquor Store	27 Coliseum Avenue	03062
Norton's Classic Café	233 Main Street	03060
Not Your Average Joe's	215-225 DW Highway	03060
O'Brien's Sports Bar	118 Main Street	03060
O'Shea's Irish Tavern	449 Amherst Street	03060
Oasis Food Café	100 Adventure Way	03060
Olivia's Pizza	379 Amherst Street	03063
Opus Lounge, LLC	14 West Hollis Street	03060
Oracle Café	1 Oracle Drive	03060
PAL Football & Spirits	Artilliary Field	03060
Pan Asia	120 Amherst Street	03060
Panda Express	219 DW Highway	03060
Panera Bread	8 Spit Brook Road	03060
Panera Bread	590 Amherst Street	03063
Papa John's	110 DW Highway	03060
Peddlar's Daughter	48 Main Street	03060
Penuche's Ale House	4 Canal Street	03060
Pho Street	427 Amherst Street Unit 11	03060
Pho Tai	28 Railroad Square	03064
Picanha's Brazilian Grill	6 Elm Street	03060
Pine Street Eatery	136 Pine Street	03060
Pizza Hut	199 DW Highway	03060
Pizzico Pizza & Pasta	7 Harold Drive	03060
Poor Pierre's Restaurant	303 Main Street	03060
Popeye's	141 DW Highway	03060
Pressed Café	108 Spitbrook Road	03063
Pressed Café To Go	3 Cotton Road	03063
R'Evolution Sports Bar	8 Temple Street	03060
Rambling House	10 Groton Road	03062
Red Robin	310 DW Highway	03062
Red's Café	3 Marmon Drive	03060

Residence Inn	25 Trafalgar Square	03063
Rhum Bar, LLC	138 Main Street	03060
River Property Group	53 High Street	03060
Riverside Barbeque Company	53 Main Street	03060
Rivier Cyber Café	420 South Main Street	03060
Rivier University/Sodexo	420 South Main Street	03060
Roland's Corner Restaurant	94 Kinsley Street	03060
Sabor Brazil	42 Canal Street	03060
Saigon Sandwich	241 Main Street	03060
Saito, LLC d/b/a Sakura Restaurant	166 DW Highway	03060
San Francisco Kitchen	53 High Street	03060
Shanghai Osaka	Sun Plaza	03060
Shirakiku	13 Broad Street	03064
Shorty's Mexican	48 Gusable Avenue	03060
Sky Meadow Country Club	6 Mountain Laurels Drive	03062
Sky Meadow Snack Shack	6 Mountain Laurels Drive	03062
Slade's Food & Spirits	4 West Hollis Street	03060
SNHMC Auxiliary Care	10 Prospect Street	03060
SNHMC Cotton Road Café	22 Cotton Road	03064
SNHMC Coffee Shop	8 Prospect Street	03060
Sodexo/BAE	65 Spit Brook Road	03060
Sodexo/BAE	95 Canal Street	03064
Soprano's Pizza	23 Main Street	03060
Spice Continent d/b/a Dawat	295 DW Highway	03060
Spyglass Brewing Company	2 Townsend West Unit 8	03063
St. Joseph's Hospital Food Services	172 Kinsley Street	03060
Starbuck's	605 Amherst Street	03060
Starbuck's	221 DW Highway	03062
Starbuck's	5 Gusabel Drive	03060
Starbuck's	310 SW Highway	03060
Stella Blu/Prestella	70 East Pearl Street	03061
Sub Zero Ice Cream	495 Amherst Street	03063
Subway	4 Coliseum Avenue	03063
Subway	112-114 DW Highway	03060
Subway	291 Main Street Unit C	03060
Surf Restaurant	207 Main Street	03060
Taco Bell	300 Main Street	03060
Tara Café	10 Tara Blvd	03062
Target Store	310 DW Highway	03060

Target Store	600 Amherst Street	03060
Temple Street Diner	200 Temple Street	03060
Terra Gia	100 Main Street	03060
Texas Roadhouse	580 Amherst Street	03063
The Arbor Restaurant	57 Palm Street	03060
The Big One Ice Cream	185 Concord Street	03060
The Flight Center	97 Main Street	03060
Thon Khao Thai Restaurant	427 Amherst Street	03060
TJ's Deli	2 Pittsburg Avenue	03062
Tostao's Tapas-Bar	170 Main Street	03060
Totally Nutz	310 DW Highway	03060
Toyota of Nashua	10 Marmon Drive	03060
Tropical Point Restaurant	58 West Hollis Street	03060
Tutti Fruitti Frozen Yogurt	310 DW Highway	03060
Twigs Café	29 Technology Way	03060
Uno Pizzeria & Grill	304 DW Highway	03060
Uno Pizzeria & Grill	593 Amherst Street	03063
Valentino's Market	383 East Dunstable Road	03062
Weathervane	164-166 DW Highway	03060
Wendy's	14 Gusabel Avenue	03060
Wendy's	44 East Hollis Street	03060
Wendy's	631 Amherst Street	03063
Wesnash Co./Dunkin Donuts	315 West Hollis Street	03060
What A Bagel	24 East Hollis Street	03060
Whole Foods Market	255 Amherst Street	03060
Winenot Boutique	221 Main Street	03060
Wing Stop	290 Main Street	03060
WJ Nashua, LLC	569 Amherst Street	03062
Yang Yang Kitchen	25 Merrit Parkway	03062
YMCA of Greater Nashua	24 Stadium Drive	03062
Yoshimama Japanese	427 Amherst Street	03063
Youyou Japanese Bistro	150 Broad Street	03060

MALLS

Appleseed Crepe & Bread	Pheasant Lane Mall 319 DW Highway	03060
Chick-Fil-A	Pheasant Lane Mall 319 DW Highway	03060
China City	Pheasant Lane Mall 319 DW Highway	03060
Cibao Kitchen	Pheasant Lane Mall 319 DW Highway	03060
Sarku Japan	Pheasant Lane Mall 319 DW Highway	03060

Sbarro #1087	Pheasant Lane Mall 319 DW Highway	03060
Taco Bell	Pheasant Lane Mall 319 DW Highway	03060
Thailand Express	Pheasant Lane Mall 319 DW Highway	03060
Udder Ecstasy (Dairy Queen)	Pheasant Lane Mall 319 DW Highway	03060

HOSPITALS/NURSING HOMES

Aynsley Place	80 Lake Street	03060
Bridges at Nashua	575 Amherst Street	03063
Courville at Nashua	22 Hunt Street	03060
Gatewood Manor	27 Will Street	03060
Greenbriar Healthcare	55 Harris Road	03062
Hunt Community Corporation	10 Allds Street	03060
Langdon Place	319 East Dunstable Road	03062
SNH Medical Ctr - West Campus	29 Northwest Blvd	03063
The Huntington at Nashua	55 Kent Lane	03062

CATERERS

Bishop Guertin	194 Lund Road	03062
Leave It To Me Event Planning	70 Temple Street	03060
Only Catering	189 Kinsley Street	03060
Rinkside Café	5 Stadium Drive	03062
Soel Sistas, LLC	Nashua Senior Center	03060
St. Joseph Community Services	Senior Center 70 Temple Street	03060
White Birch Catering, Inc.	10 Spruce Street	03060

PRIVATE SCHOOL/DAY CARE

Creative Years Child Development Center	30 Broad Street	03063
Girls Inc. of New Hampshire	27 Burke Street	03060
Granite Start, LLC	4 Merrit Parkway	03062
Kinderkare Learning Center	3 Holiday Circle	03062
Launching Pad/Basic Beginnings	53 Northeastern Blvd	03062
Nashua Adult Learning Center	4 Lake Street	03060
Nashua Catholic Jr. High School	6 Bartlett Avenue	03064
Nashua Child Learning Center	5 St. Laurent Street	03060
Nashua Children's Home	86 Concord Street	03060
Nashua Children's Home	125 Amherst Street	03064
Nashua Community College	505 Amherst Street	03060
Southern NH Services Child Development Ctr	134 Allds Street	03060
St. Christopher Elementary School	20 Cushing Avenue	03060
World Academy	138 Spit Brook Road	03062

SOCIAL CLUBS

American Legion	11 Court Street	03060
Club Lafayette, A.C.	34 High Street	03060
Club National, Inc.	127 Pine Street	03060
Horse Pond Fish & Game Club	Horse Pond Avenue	03063
Masonic Board of Trustees	196 Main Street	03060
Nashua Elks Lodge 720	12 Murphy Drive	03062
Nashua Senior Activity Center	70 Temple Street	03060
Polish American Club of Nashua	15 School Street	03060

City of Nashua, New Hampshire

ANNUAL REPORT
INDUSTRIAL PRETREATMENT PROGRAM

2021

APPENDIX C

Microbreweries

CITY OF NASHUA MICROBREWERIES

BUSINESS	ADDRESS		PERMIT APPLICATION SENT	PERMIT APPLICATION RECEIVED	PERMIT ISSUED
Incredibrew, Inc. Erik Croswell erik@incredibrew Sky Croswell	112 DW Highway, South	03060	Yes	No	
Liquid Therapy	14 Court Street Unit B	03060	No	No	
Martha's Exchange Restaurant & Brewery William J. Fokas Fokas@yahoo.com	185 Main Street	03060	Yes	Yes	
Millyard Brewery, LLC Dean Baxter info@millyardbrewery.com	25 East Otterson Street #3	03060	Yes	Yes	
Odd Fellows Brewing Company Patrick O'Brien patrick@obrienssportsbar.com	124 Main Street	03060	Yes	No	
Rambling House David Gleeson d.gleeson@comcast.net Denis Glesson	57 Factory Street		Yes	Yes	Yes (Draft)
Spyglass Brewing John Wagner john@spyglassbrewing.com	2 Townsend West Suite 8	03063	No	No	
White Birch Brewing, LLC David Herlicka dave@whitebirchbrewing.com	460 Amherst Street	03063	Yes	No	
Omnium Brewery**	300 Main Street	03060	Yes		
Spyglass Brewery**	Innovative Way		Yes		

** Omnium and Spyglass still under review by Building Dept

City of Nashua, New Hampshire

ANNUAL REPORT
INDUSTRIAL PRETREATMENT PROGRAM

2021

APPENDIX D

Sludge Quality Certification

THE CITY OF NASHUA
Division of Public Works
Wastewater Department

"The Gate City"

February 15, 2022

Water Technical Unit
U.S. Environmental Protection Agency Region 7
Attn: BIOSOLIDS CENTER
WWPD/WENF
11201 Renner Boulevard
Lenexa, Kansas 66219

RE: Calendar Year 2021 Nashua WTF Annual Report Information

To Whom It May Concern:

The City of Nashua's Wastewater Treatment Facility (NWTF) is located at 2 Sawmill Road in Nashua, N.H. The following information is submitted for compliance with the reporting requirements of 40 CFR Part 503 Standards for the Use or Disposal of Sewage Sludge.

The NWTF utilizes anaerobic digestion as the process to achieve stabilization and vector attraction reduction requirements.

Part 503.18

Reporting requires POTWs with a design flow rate > or = 1 MGD to submit the information in 503.17(a). The NWTF has a design flow of 16.0 MGD. Annual biosolids production was approximately 1,947 **dry metric tons** (please see Attachment A).

Part 503.17(a)(4)(i)(A)

The concentration of each pollutant listed in Table 3 of 503.13 in the bulk sewage sludge. The pollutant concentrations are shown in the summary referred to as Attachment B. During 2021 there were no exceedences to the Table 3 limits (please see Attachment B).

Part 503.17(a)(4)(i)(B)

The following certification statement. See attached Certification Statements.

Part 503.17(a)(4)(i)(C)

A description of how the Class B pathogen requirements in 503.32(b) are met. The Class B pathogen requirements in 503.32(b) were met through anaerobic digestion. The sewage sludge is treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature are between 15 days at 35 to 55 degrees Celsius and 60 days at 20 degrees Celsius.

Part 503.17(a)(4)(i)(D)

A description of how the vector attraction reduction requirements are met. The vector attraction reduction requirements are met through the option listed in 503.33(b)(1) where the mass of volatile solids in the sewage sludge is reduced by a minimum of 38 percent.

I trust this completes the calendar year 2021 submittal requirements for the preparer as outlined in Part 503.18. If you have any questions please do not hesitate to call me at the Nashua WTF, (603) 589-3560.

Sincerely,

David L. Boucher
Superintendent
Nashua Wastewater Facility

cc: Lisa Fauteux, DPW Division Director
Noelle Osborne, NWTF, Plant Operations Supervisor
Michelle Gaudette, NWTF, Laboratory Supervisor
Nancy Lesieur, NHDES, Permits and Compliance
Jess Casterline, RMI, Environmental Compliance Coordinator

enclosures: Attachment A -2021 Class B Biosolid Weight Totals
Attachment B -2021 Metals Results
2021 Certification Statements

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

SLUDGE QUALITY CERTIFICATION

as authorized by the NH Department of Environmental Services, Water Division (NHDES)
pursuant to RSA 485-A and Part Env-Wq 809 of the *New Hampshire Sludge Management Rules*

I. **GENERATOR IDENTIFICATION:**

Generator Name/Address: Nashua Wastewater Treatment Facility, 2 Sawmill Rd Nashua, NH 03060
Sludge Quality Certification No.: SQC-9908
Facility Location: 2 Sawmill Rd, Nashua, NH 03060
Facility Operator Name/Title: Noelle Osborne, Operations Supervisor
Facility Type/Activities: Publicly Owned Treatment Works

II. **FILE REFERENCE/RECORD OF APPLICATION:**

Original Certificate Issued: February 11, 2000
Date(s) Application Received: Received application on August 5, 2016
Received additional information on September 9, 2016
Received SQC renewal application on July 9, 2021

III. **TERMS AND CONDITIONS:**

1. All requirements of Env-Wq 800, NH Sludge Management Administrative Rules (Rules) as well as the Federal regulations as specified in 40 CFR 503 must be met, including, but not limited to:

   4. Sludge Quality Certification Requirements in Part Env-809, as applicable.

   5. Land Application and Management Restrictions in Part Env-810 and Part Env-806, as applicable.

   6. RSA 483, the Rivers Management Protection Program, as applicable.
      i. Land application of the generator's biosolids, class A or B, shall be set back 250 feet from any designated river as defined in RSA 483. Further, any biosolids, class A or B, land applied within ¼ mile of any designated river shall be immediately incorporated into the soil.

IV. **SPECIAL CONDITIONS:**

1. The generator shall analyze its sludge once per ***60 days*** according to the requirements of Env-Wq 809.07(a) and annually according to the requirements of Env-Wq 809.07(c) (d). If the result of any required analysis exceeds the standards in Env-Wq 809.03(c), the generator shall notify NHDES immediately and implement the requirements of Env-Wq 809.08(b) and Env-Wq 809.08(c). If the results of any required analysis exceed the contaminant concentrations as described in Env-Wq 809.06(e), the generator shall immediately notify DES to discuss additional testing and management requirements pursuant to continued recycling of generator's sludge.

2. If NHDES chemical standards or guidelines are updated, the generator's sludge will be subject to the most recent standards or policy guidelines.

3. The conditions of this SQC shall apply to any contractor or facility that accepts or treats the generator's sludge.

4. Before recycling the sludge into biosolids, the generator's sludge shall be treated to reduce pathogens and vector attraction according to the methods cited in CRF 40 part 503 subpart D to be approved by NHDES. If the generator proposes to change its methods of pathogen reduction and vector attraction reduction, the generator shall receive written approval from NHDES prior to continuing a program of land application.

5. In addition to the annual monitoring required by Env-Wq 809.06, the generator shall analyze its sludge once annually for the following Per- and Polyfluoroalkyl Substances (PFAS):

Compound		CAS #
Perfluorobutanoic Acid	PFBA	375-22-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorobutanesulfonic Acid	PFBS	375-73-5
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluorooctanesulfonic Acid	PFOS	1763-23-1

The laboratory analysis method required will be LCMSMS using isotope dilution or by another approved EPA test method for sludge. Additional PFAS may be added to the testing protocol, or the laboratory method may be revised, as required, upon determination by the NHDES.

6. The SQC holder shall submit with the annual report required in Env-Wq 809.09 (b) a narrative of the pollution prevention and pretreatment efforts undertaken to reduce or eliminate perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), perfluorononanoic acid (PFNA), and perfluorohexanesulfonic acid (PFHxS) from the sludge. The written narrative will be broken down by all generators of sludge that are covered by this SQC.

V. **EFFECTIVE/EXPIRATION DATE:** Effective from the date of signature, below. This renewed certification will expire 5 years from the day after the expiration date of the previous certificate term, i.e. September 26, 2026.

VI. **AUTHORIZATION:** Pursuant to RSA 485-A and Env-Wq 809 of the Rules, this Sludge Quality Certification (certification) is hereby issued to the generator as identified in Section I to beneficially reuse the sludge generated by the subject facility in accordance with state and federal statutes, the Rules, and the Terms and Conditions set forth in Sections III and IV.

BY EXERCISING ANY RIGHTS UNDER THIS CERTIFICATION, THE GENERATOR HAS AGREED TO ALL TERMS AND CONDITIONS OF THE CERTIFICATION. No liability is incurred by the State of New Hampshire by reason of any certification of the sludge produced by the generator for beneficial use. Approval by the Department is based on representations made by the generator that this sludge complies with all requirements of the Rules as they apply to the land application or disposal of sludge. Representations made within the application have not necessarily been reviewed by the Department to confirm compliance. Instead, issuance of this certification places full reliance on the generator's representations that the application meets the requirements of the Rules. Failure of the sludge to actually meet the quality standards in Env-Wq 809 or failure of the generator to otherwise comply with the terms and conditions of this certification may result in civil or criminal penalties, suspension or revocation of this certification. No warranty/guarantee is intended or implied by reason of any advice given by the Department or its staff.

This certification shall not eliminate the need to obtain all requisite federal, state or local permits, licenses or approvals, or to comply with all other applicable federal, state, district and local permits, ordinances, laws, approvals or conditions for use or disposal of this sludge.

Anthony Drouin, Adminsitrator
Residuals Management Section
Wastewater Engineering Bureau

August 5, 2021
Date

Contact the NHDES Water Division, Residuals Management Section at (603) 271-3571, if there are questions.

City of Nashua, New Hampshire

ANNUAL REPORT
INDUSTRIAL PRETREATMENT PROGRAM

2021

APPENDIX E

Effluent Biotoxicity Reports

ENTHALPY ANALYTICAL

Leaders in Environmental Toxicology & Chemistry

July 13, 2021

Dave Boucher
Nashua Wastewater Treatment Facility
Sawmill Road
Nashua, New Hampshire 03060

Enclosed, please find a copy of our report evaluating the toxicity of an effluent sample collected from the Nashua, New Hampshire Wastewater Treatment Facility for the June 2021 sampling period. Acute toxicity was evaluated using the freshwater species, *Ceriodaphnia dubia* and *Pimephales promelas*.

Please do not hesitate to call me should you have any questions regarding the report.

Sincerely,

Enthalpy Analytical, LLC

Meredith Wheeler
Project Manager

Enclosure
WET Test Report Certification
Report 35176-21-06
Email only
cc: Michelle Gaudette

WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION

Permittee Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: _____ _____

Authorized Signature

_____

Print or Type Name

City of Nashua

Print or Type the Permittee's Name

NH0100170

Type or Print the NPDES Permit No.

WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION (Bioassay Laboratory)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: July 13, 2021

Kirk Cram Meredith Wheeler

Digitally signed by Meredith Wheeler
DN: cn=Meredith Wheeler, o=Enthalpy Analytical, ou=Project Manager, email=Meredith.Wheeler@Enthalpy.com, c=US
Date: 2021.07.13 15:42:47 -04'00'

Kirk Cram
Laboratory Director - Enthalpy Analytical, LLC

ENTHALPY
ANALYTICAL

TOXICOLOGICAL EVALUATION OF A TREATED MUNICIPAL EFFLUENT BIOMONITORING SUPPORT FOR A NPDES PERMIT: June 2021

Nashua Wastewater Treatment Facility
Nashua, New Hampshire
NPDES Permit Number NH0100170

Prepared For:

Nashua Wastewater Treatment Facility
Sawmill Road
Nashua, New Hampshire 03060

Prepared By:

Enthalpy Analytical, LLC
One Lafayette Road
Hampton, New Hampshire 03842

June 2021
Reference Number: Nashua35176-21-06

STUDY NUMBER 35176

EXECUTIVE SUMMARY

The following summarizes the results of 48-hour acute exposure bioassays performed in June 2021 to support the NPDES biomonitoring requirements of the Nashua, New Hampshire Wastewater Treatment Facility. Acute assays were completed using the freshwater species, *Ceriodaphnia dubia* and *Pimephales promelas*.

C. dubia, cultured at Enthalpy, were <24 hours old juveniles. *P. promelas*, supplied by a laboratory approved vendor, were 1-14 days old at the start of the assay. Dilution water was receiving water collected from the Merrimack River upstream of the discharge. Samples were received under chain of custody in good order. All sample receipt, test conditions and control endpoints were within protocol specifications, except where otherwise noted.

The results presented in this report relate only to the samples described on the chain(s) of custody and sample receipt log(s), and are intended to be used only by the submitter. Results from the acute exposure assays and their relationship to permit limits are summarized in the following matrix.

Species	Exposure	LC-50	A-NOEC	Permit Limit (LC-50)	Effluent Meets Permit Limit	Assay Meets Protocol Limits
Ceriodaphnia dubia	48 Hours	>100%	100%	≥100%	Yes	Yes
Pimephales promelas	48 Hours	>100%	100%	≥100%	Yes	Yes

COMMENTS:
NC = Not Calculated.

TOXICOLOGICAL EVALUATION
OF A TREATED MUNICIPAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
June 2021

Nashua Wastewater Treatment Facility
Nashua, New Hampshire
NPDES Permit Number NH0100170

1.0 INTRODUCTION

This report presents the results of toxicity tests completed on a composite effluent sample collected from the Nashua, New Hampshire Wastewater Treatment Facility (Nashua WWTF). Testing was based on programs and protocols developed by the US EPA (2002), with exceptions as noted by US EPA Region I (2011), and involved conducting 48-hour acute toxicity tests with the freshwater species, *Ceriodaphnia dubia* and *Pimephales promelas*. Testing was performed at Enthalpy Analytical, LLC (Enthalpy), Hampton, New Hampshire in accordance with the provisions of TNI Standards (2009).

Acute toxicity tests involve preparing a series of concentrations by diluting effluent with control water. Groups of test animals are exposed to each concentration and a control for a specified period. In the acute tests, mortality data for each concentration are used to calculate the median lethal concentration, or LC-50, defined as the effluent concentration that kills half of the test animals. Samples with high LC-50 values are less likely to cause significant environmental impacts. The acute no observed effect concentration (A-NOEC) provides information on the effluent concentration having minimal acute effects in the environment and is defined as the highest tested effluent concentration that causes no significant mortality.

2.0 MATERIALS AND METHODS

2.1 General Methods

Toxicological and analytical protocols used in this program follow procedures primarily designed to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms (US EPA 2002), and for the analysis of water samples (APHA 2012). See Section 4.0 for a list of references.

2.2 Test Species

C. dubia were maintained in laboratory water at 25±1°C with a photoperiod of 16:8 hours light:dark. Cultures are fed daily with a yeast/trout chow/Cerophyll or alfalfa leaves (YTC) mixture supplemented with *Pseudokirchneriella subcapitata* (algae) (US EPA 2002). Adults on a brood board were isolated 24 hours prior to test start.

When necessary, *P. promelas* were acclimated to approximate test conditions prior to use in the assay. Organisms were transferred to test chambers using an inverted glass pipet, minimizing the amount of water added to test solutions. Cultures were fed newly hatched *Artemia* nauplii until test start. Twenty control fish were weighed during the test to confirm loading rates. The loading rate was below the maximum 0.4 g/L recommended for assays conducted at 25°C. Fish weights and loading calculations are included in Appendix A.

2.3 Effluent, Receiving Water, and Laboratory Water

Effluent and receiving water collection information is provided in Table 1. Samples were received at 0-6°C as per 40 CFR §136.3 unless otherwise noted, stored at 4±2°C and warmed to 25±1°C prior to preparing test solutions. Laboratory water was Brentwood Springs Water, a natural groundwater provided by an outside source. This water has been used to successfully culture freshwater organisms.

Total residual chlorine (TRC) was measured by amperometric titration (MDL 0.02 mg/L) in the effluent samples prior to use in the assays. Samples with ≥0.02 mg/L TRC were dechlorinated using sodium thiosulfate (US EPA 2002) and a control treatment using laboratory water adjusted with the same amount of sodium thiosulfate used to dechlorinate the effluent was run concurrently with the assay. If sample pH measured <6.0 SU or >9.0 SU, samples were adjusted using sodium hydroxide or hydrochloric acid, respectively, and a control treatment using laboratory water adjusted with the same amount of either compound used to modify sample pH was run concurrently with the assay. When applicable, data from sodium thiosulfate and/or pH adjusted laboratory control treatments can be found in Appendix A.

2.4 Acute Exposure Bioassay

The 48-hour static acute assays were conducted at 25±1°C with a photoperiod of 16:8 hours light:dark. Test concentrations were 100% (undiluted), 50%, 25%, 12.5%, and 6.25% effluent. Daphnids were maintained in 30 mL test chambers with approximately 25 mL of test solution in each of 4 replicates with 5 organisms/replicate. Replicates in the *C. dubia* assay were not randomized; rather, test organisms were derived from a pool of mixed organisms recovered from Enthalpy's culture the morning of testing. All organisms used were recovered from the same type of culture water. Minnows were maintained in 250 mL glass beakers with 200 mL of test solution in each of 4 replicates with 10 organisms/replicate. Replicates were not randomized during testing; rather, organisms were added randomly at test initiation by replicate across test solutions in an alternating fashion (alternating allocation).

Survival was recorded daily in all test replicates of both assays. A fifth replicate in the daphnid assay was included as a surrogate test chamber to obtain daily water qualities without disturbing the test animals, and was treated the same as actual test chambers with the addition of animals and food, but was not used to determine endpoint data. Dissolved oxygen and pH were measured daily, and specific conductivity was measured at the start of the assay. For the minnow assay, one replicate of each treatment was measured daily for pH and temperature, and dissolved oxygen was measured daily in all test replicates. The specific conductivity of test solutions was measured in one replicate of each test concentration at the start of the minnow assay.

2.5 Data Analysis

When applicable, survival data at 48 hours are analyzed for acute toxicity using CETIS™ v1.9.6.3, Comprehensive Environmental Toxicity Information System, software. The program computes statistical endpoints following US EPA decision tree guidelines. If survival in the highest test concentration is >50%, the LC-50 is obtained by direct observation of the raw data. As needed, the A-NOEC is determined as the highest test concentration that caused no significant mortality.

2.6 Quality Control

As part of the laboratory quality control program, reference toxicant evaluations are completed on a regular basis for each test species. These results provide regular laboratory performance evaluation through the comparison of historic data sets. See Table 2 for details.

3.0 RESULTS AND DISCUSSION

Results of the acute toxicity tests completed using *C. dubia* and *P. promelas* are summarized in Table 3. Table 4 contains effluent and diluent characteristics. US EPA Region I Attachment F toxicity test summary sheets are included after the tables. Support data are provided in Appendix A.

Minimum test acceptability criteria require ≥90% survival in the control concentrations. Achievement of these results indicates that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 3 for test acceptability.

4.0 LITERATURE CITED

40 CFR §136.3. *Code of Federal Regulations* (CFR), Protection of the Environment (Title 40), Guidelines Establishing Test Procedures for the Analysis of Pollutants (Part 136), Identification of Test Procedures (sub-part 3), Table II-Required Containers, Preservation Techniques, and Holding Times.

APHA. 2012. *Standard Methods for the Examination of Water and Wastewater*, 22nd Edition. Washington D.C.

The NELAC Institute (TNI). 2009. *Environmental Laboratory Sector, Volume 1: Management and Technical Requirements for Laboratories Performing Environmental Analysis (TNI Standard)*. EL-V1-2009.

US EPA. 2000. *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)*. EPA 821-B-00-004.

US EPA. 2002. *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*. Fifth Edition. EPA-821-R-02-012.

US EPA Region I. 2011. *US EPA Region 1 Freshwater Acute Toxicity Test Procedure and Protocol*. US EPA Region I Office, Boston, Massachusetts. June 28, 2011.

TABLE 1. Sample Collection Information.
Nashua WWTF Effluent Biomonitoring Evaluation. June 2021.

Sample Description	Type	Collection Date	Collection Time	Receipt Date	Receipt Time	Receipt Temp °C
Effluent	Comp	06/07-08/21	0715-0709	06/08/21	1100	9 [a]
Receiving Water	Grab	06/07/21	0945	06/08/21	1100	9 [a]

COMMENTS:
[a] Upon receipt, the temperature was outside of the range of 0-6°C per 40 CFR §136.3 for NPDES effluent samples and support chemistry samples. Samples were received with ice in the cooler, and were picked up and hand delivered by Enthalpy's courier the day sampling was completed.

TABLE 2. Reference Toxicant Data.
Nashua WWTF Effluent Biomonitoring Evaluation. June 2021.

Date	Organism Lot	Endpoint	Value	Historic Mean/ Tendency	Acceptable Range	Reference Toxicant
C. dubia						
06/30/21	00CdEAH063021	Survival: LC-50	31.9	33.1	16.2 – 50.0	SDS (mg/L)
P. promelas						
06/30/21	06PpARO062821	Survival: LC-50	24.2	31.3	22.5 – 40.2	SDS (mg/L)

Means and Acceptable Ranges based on the most recent 20 reference toxicant assays.

TABLE 3. Acute Evaluation Results.
Nashua WWTF Effluent Biomonitoring Evaluation. June 2021.

Percent Survival

Species	Exposure	Lab	RW	6.25%	12.5%	25%	50%	100%
C. dubia	48 hours	100%	100%	100%	95%	100%	100%	100%
P. promelas	48 hours	100%	100%	100%	100%	100%	100%	100%

LC-50 and A-NOEC Results

Species	Exposure	Spearman-Karber	Linear Interpolation	Direct Observation	A-NOEC
C. dubia	48 Hours	NC	NC	>100%	NC
P. promelas	48 Hours	NC	NC	>100%	NC

COMMENTS:
RW = Receiving Water; used as the diluent.
NC = Not Calculated

TABLE 4. WET Support Chemistry Data.
Nashua WWTF Effluent Biomonitoring Evaluation. June 2021.

PARAMETER [a]	UNIT	EFFLUENT	RECEIVING WATER
Specific Conductivity	µmhos/cm	819	153
pH	SU	7.07	6.86
Total Residual Chlorine	mg/L	<0.02	-
Alkalinity	mg/L	53	13
Hardness	mg/L	57.4	21.2
Total Solids	mg/L	473	94
Total Suspended Solids	mg/L	4.7	4.3
Total Dissolved Solids	mg/L	497	95
Total Organic Carbon	mg/L	8.5	4.2
Ammonia	mg/L as N	11.2	0.13
Aluminum, total	mg/L	0.0229	0.0462
Cadmium, total	mg/L	<0.0001	<0.0001
Calcium, total	mg/L	17.1	6.33
Copper, total	mg/L	0.0107	0.00106
Lead, total	mg/L	0.000306	0.000527
Magnesium, total	mg/L	3.56	1.31
Nickel, total	mg/L	0.00505	0.000713
Zinc, total	mg/L	0.0779	0.00343

COMMENTS:
Additional water quality and chemistry support data are available in Appendix A.
[a] Analytical results provided by Enthalpy Analytical, LLC in Richmond, Virginia. A full copy of their report is available upon request.

ENTHALPY ANALYTICAL

Leaders in Environmental Toxicology & Chemistry

October 5, 2021

Dave Boucher
Nashua Wastewater Treatment Facility
Sawmill Road
Nashua, New Hampshire 03060

Enclosed, please find a copy of our report evaluating the toxicity of an effluent sample collected from the Nashua, New Hampshire Wastewater Treatment Facility for the August 2021 sampling period. Acute toxicity was evaluated using the freshwater species, *Ceriodaphnia dubia* and *Pimephales promelas*.

Please do not hesitate to call me should you have any questions regarding the report.

Sincerely,

Enthalpy Analytical, LLC

Meredith Wheeler
Project Manager

Enclosure
WET Test Report Certification
Report 35291-21-08
Email only

cc: Michelle Gaudette

WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION

Permittee Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: _____ _____

Authorized Signature

_____

Print or Type Name

City of Nashua

Print or Type the Permittee's Name

NH0100170

Type or Print the NPDES Permit No.

WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION (Bioassay Laboratory)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: October 5, 2021

Meredith Wheeler

Digitally signed by Meredith Wheeler
DN: cn=Meredith Wheeler, o=Enthalpy Analytical, ou=Project Manager, email=Meredith.Wheeler@Enthalpy.com, c=US
Date: 2021.10.05 16:20:03 -04'00'

Meredith Wheeler
Project Manager - Enthalpy Analytical, LLC

ENTHALPY
ANALYTICAL

TOXICOLOGICAL EVALUATION OF A TREATED MUNICIPAL EFFLUENT BIOMONITORING SUPPORT FOR A NPDES PERMIT: August 2021

Nashua Wastewater Treatment Facility
Nashua, New Hampshire
NPDES Permit Number NH0100170

Prepared For:

Nashua Wastewater Treatment Facility
Sawmill Road
Nashua, New Hampshire 03060

Prepared By:

Enthalpy Analytical, LLC
One Lafayette Road
Hampton, New Hampshire 03842

August 2021
Reference Number: Nashua35291-21-08

STUDY NUMBER 35291

EXECUTIVE SUMMARY

The following summarizes the results of 48-hour acute exposure bioassays performed in August 2021 to support the NPDES biomonitoring requirements of the Nashua, New Hampshire Wastewater Treatment Facility. Acute assays were completed using the freshwater species, *Ceriodaphnia dubia* and *Pimephales promelas*.

C. dubia, cultured at Enthalpy, were <24 hours old juveniles. *P. promelas*, supplied by a laboratory approved vendor, were 1-14 days old at the start of the assay. Dilution water was receiving water collected from the Merrimack River upstream of the discharge. Samples were received under chain of custody in good order. All sample receipt, test conditions and control endpoints were within protocol specifications, except where otherwise noted.

The results presented in this report relate only to the samples described on the chain(s) of custody and sample receipt log(s), and are intended to be used only by the submitter. Results from the acute exposure assays and their relationship to permit limits are summarized in the following matrix.

Acute Toxicity Evaluation

Species	Exposure	LC-50	A-NOEC	Permit Limit (LC-50)	Effluent Meets Permit Limit	Assay Meets Protocol Limits
Ceriodaphnia dubia	48 Hours	>100%	100%	≥100%	Yes	Yes
Pimephales promelas	48 Hours	>100%	100%	≥100%	Yes	Yes

TOXICOLOGICAL EVALUATION
OF A TREATED MUNICIPAL EFFLUENT
BIOMONITORING SUPPORT FOR A NPDES PERMIT:
August 2021

Nashua Wastewater Treatment Facility
Nashua, New Hampshire
NPDES Permit Number NH0100170

1.0 INTRODUCTION

This report presents the results of toxicity tests completed on a composite effluent sample collected from the Nashua, New Hampshire Wastewater Treatment Facility (Nashua WWTF). Testing was based on programs and protocols developed by the US EPA (2002), with exceptions as noted by US EPA Region I (2011), and involved conducting 48-hour acute toxicity tests with the freshwater species, *Ceriodaphnia dubia* and *Pimephales promelas*. Testing was performed at Enthalpy Analytical, LLC (Enthalpy), Hampton, New Hampshire in accordance with the provisions of TNI Standards (2009).

Acute toxicity tests involve preparing a series of concentrations by diluting effluent with control water. Groups of test animals are exposed to each concentration and a control for a specified period. In the acute tests, mortality data for each concentration are used to calculate the median lethal concentration, or LC-50, defined as the effluent concentration that kills half of the test animals. Samples with high LC-50 values are less likely to cause significant environmental impacts. The acute no observed effect concentration (A-NOEC) provides information on the effluent concentration having minimal acute effects in the environment and is defined as the highest tested effluent concentration that causes no significant mortality.

2.0 MATERIALS AND METHODS

2.1 General Methods

Toxicological and analytical protocols used in this program follow procedures primarily designed to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms (US EPA 2002), and for the analysis of water samples (APHA 2012). See Section 4.0 for a list of references.

2.2 Test Species

C. dubia were maintained in laboratory water at 25±1°C with a photoperiod of 16:8 hours light:dark. Cultures are fed daily with a yeast/trout chow/Cerophyll or alfalfa leaves (YTC) mixture supplemented with *Pseudokirchneriella subcapitata* (algae) (US EPA 2002). Adults on a brood board were isolated 24 hours prior to test start.

When necessary, *P. promelas* were acclimated to approximate test conditions prior to use in the assay. Organisms were transferred to test chambers using an inverted glass pipet, minimizing the amount of water added to test solutions. Cultures were fed newly hatched *Artemia* nauplii until test start. Twenty control fish were weighed during the test to confirm loading rates. The loading rate was below the maximum 0.4 g/L recommended for assays conducted at 25°C. Fish weights and loading calculations are included in Appendix A.

2.3 Effluent, Receiving Water, and Laboratory Water

Effluent and receiving water collection information is provided in Table 1. Samples were received at 0-6°C as per 40 CFR §136.3 unless otherwise noted, stored at 4±2°C and warmed to 25±1°C prior to preparing test solutions. Laboratory water was Brentwood Springs Water, a natural groundwater provided by an outside source. This water has been used to successfully culture freshwater organisms.

Total residual chlorine (TRC) was measured by amperometric titration (MDL 0.02 mg/L) in the effluent samples prior to use in the assays. Samples with ≥0.02 mg/L TRC were dechlorinated using sodium

thiosulfate (US EPA 2002) and a control treatment using laboratory water adjusted with the same amount of sodium thiosulfate used to dechlorinate the effluent was run concurrently with the assay. If sample pH measured <6.0 SU or >9.0 SU, samples were adjusted using sodium hydroxide or hydrochloric acid, respectively, and a control treatment using laboratory water adjusted with the same amount of either compound used to modify sample pH was run concurrently with the assay. When applicable, data from sodium thiosulfate and/or pH adjusted laboratory control treatments can be found in Appendix A.

2.4 Acute Exposure Bioassay

The 48-hour static acute assays were conducted at 25±1°C with a photoperiod of 16:8 hours light:dark. Test concentrations were 100% (undiluted), 50%, 25%, 12.5%, and 6.25% effluent. Daphnids were maintained in 30 mL test chambers with approximately 25 mL of test solution in each of 4 replicates with 5 organisms/replicate. Replicates in the *C. dubia* assay were not randomized; rather, test organisms were derived from a pool of mixed organisms recovered from Enthalpy's culture the morning of testing. All organisms used were recovered from the same type of culture water. Minnows were maintained in 250 mL vessels with 200 mL of test solution in each of 4 replicates with 10 organisms/replicate. Replicates were not randomized during testing; rather, organisms were added randomly at test initiation by replicate across test solutions in an alternating fashion (alternating allocation).

Survival was recorded daily in all test replicates of both assays. A fifth replicate in the daphnid assay was included as a surrogate test chamber to obtain daily water qualities without disturbing the test animals, and was treated the same as actual test chambers with the addition of animals and food, but was not used to determine endpoint data. Dissolved oxygen and pH were measured daily, and specific conductivity was measured at the start of the assay. For the minnow assay, one replicate of each treatment was measured daily for pH and temperature, and dissolved oxygen was measured daily in all test replicates. The specific conductivity of test solutions was measured in one replicate of each test concentration at the start of the minnow assay.

2.5 Data Analysis

When applicable, survival data at 48 hours are analyzed for acute toxicity using CETIS™ v1.9.6.3, Comprehensive Environmental Toxicity Information System, software. The program computes statistical endpoints following US EPA decision tree guidelines. If survival in the highest test concentration is >50%, the LC-50 is obtained by direct observation of the raw data. As needed, the A-NOEC is determined as the highest test concentration that caused no significant mortality.

2.6 Quality Control

As part of the laboratory quality control program, reference toxicant evaluations are completed on a regular basis for each test species. These results provide regular laboratory performance evaluation through the comparison of historic data sets. See Table 2 for details.

2.7 Protocol Deviation

The temperatures measured at the bench were below the target range throughout the assay, however the incubator temperatures were maintained within the desired range on all days.

3.0 RESULTS AND DISCUSSION

Results of the acute toxicity tests completed using *C. dubia* and *P. promelas* are summarized in Table 3. Table 4 contains effluent and diluent characteristics. US EPA Region I Attachment F toxicity test summary sheets are included after the tables. Support data are provided in Appendix A.

Minimum test acceptability criteria require ≥90% survival in the control concentrations. Achievement of these results indicates that healthy test organisms were used and that the dilution water had no significant adverse impact on the outcome of the assay. See the Executive Summary and Table 3 for test acceptability.

4.0 LITERATURE CITED

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US EPA. 2000. *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)*. EPA 821-B-00-004.

US EPA. 2002. *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*. Fifth Edition. EPA-821-R-02-012.

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TABLE 1. Sample Collection Information.
Nashua WWTF Effluent Biomonitoring Evaluation. August 2021.

Sample Description	Type	Collection Date	Collection Time	Receipt Date	Receipt Time	Receipt Temp °C
Effluent	Comp	08/03-04/21	0710-0715	08/04/21	1205	7 [a]
Receiving Water	Grab	08/03/21	1045	08/04/21	1205	7 [a]

COMMENTS:
[a] Upon receipt, the temperature was outside of the range of 0-6°C per 40 CFR §136.3 for NPDES effluent samples and support chemistry samples. Samples were received with ice in the cooler, and were picked up and hand delivered by Enthalpy's courier the day sampling was completed.

TABLE 2. Reference Toxicant Data.
Nashua WWTF Effluent Biomonitoring Evaluation. August 2021.

Date	Organism Lot	Endpoint	Value	Historic Mean/ Tendency	Acceptable Range	Reference Toxicant
C. dubia						
08/19/21	00CdEAH081921	Survival: LC-50	33.6	34.0	16.9 – 51.2	SDS (mg/L)
P. promelas						
08/19/21	08PpABS081721	Survival: LC-50	23.3	30.5	21.2 – 39.8	SDS (mg/L)

Means and Acceptable Ranges based on the most recent 20 reference toxicant assays.

TABLE 3. Acute Evaluation Results.
Nashua WWTF Effluent Biomonitoring Evaluation. August 2021.

Percent Survival

Species	Exposure	Lab	RW	6.25%	12.5%	25%	50%	100%
C. dubia	48 hours	100%	100%	100%	100%	100%	95%	100%
P. promelas	48 hours	100%	97.5%	97.5%	97.5%	100%	97.5%	100%

LC-50 and A-NOEC Results

Species	Exposure	Spearman-Karber	Linear Interpolation	Direct Observation	A-NOEC
C. dubia	48 Hours	NC	NC	>100%	100%
P. promelas	48 Hours	NC	NC	>100%	100%

COMMENTS:
RW = Receiving Water; used as the diluent.
NC = Not Calculated

TABLE 4. WET Support Chemistry Data.

Nashua WWTF Effluent Biomonitoring Evaluation. August 2021.

PARAMETER [a]	UNIT	EFFLUENT	RECEIVING WATER
Specific Conductivity	µmhos/cm	870	140
pH	SU	6.88	7.01
Total Residual Chlorine	mg/L	<0.02	-
Alkalinity	mg/L	48	10
Hardness	mg/L	69	20
Total Solids	mg/L	530	91
Total Suspended Solids	mg/L	3.0	4.1
Total Dissolved Solids	mg/L	510	95
Total Organic Carbon	mg/L	16	7.5
Ammonia	mg/L as N	9.3	0.41
Aluminum, total	mg/L	0.017	0.17
Cadmium, total	mg/L	<0.0001	<0.0001
Calcium, total	mg/L	22	6.3
Copper, total	mg/L	0.0092	0.0011
Lead, total	mg/L	0.00033	0.00058
Magnesium, total	mg/L	3.4	1.0
Nickel, total	mg/L	0.0051	0.00069
Zinc, total	mg/L	0.082	0.0043

COMMENTS:
Additional water quality and chemistry support data are available in Appendix A.
[a] Analytical results provided by Enthalpy Analytical, LLC in Richmond, Virginia. A full copy of their report is available upon request.